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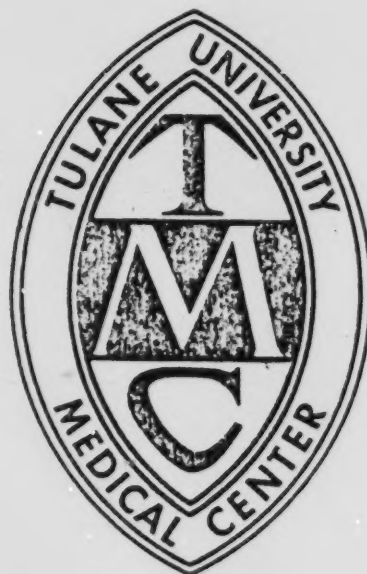
A survey of 270 graduates of Tulane University's School of Public Health and Tropical Medicine (SPHMT) during 1969 to 1973 was conducted to determine what graduates did in their jobs and how their SPHMT learning experiences related to their jobs. The methodology used in the survey is described and results are presented in tabular form with explanatory text. Results showed that 96 percent of the respondents were employed in health related jobs but only 54 percent believed that their jobs were directly related to their SPHMT program. The appendices contain the alumni survey questionnaire and cover letters, source of first information about the SPHMT, and activities scored high and low by job group. (SFG)

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APPENDIX A

REPORT ON SURVEY OF GRADUATES (1969-73)
TULANE SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE



U.S. DEPARTMENT OF HEALTH,
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Submitted
to
The General Faculty of the
School of Public Health and Tropical Medicine
by
The Committee on Core Objectives
February 16, 1976

* Alumni-Faculty Feedback for
Curriculum Revision
Tulane University
Final Report

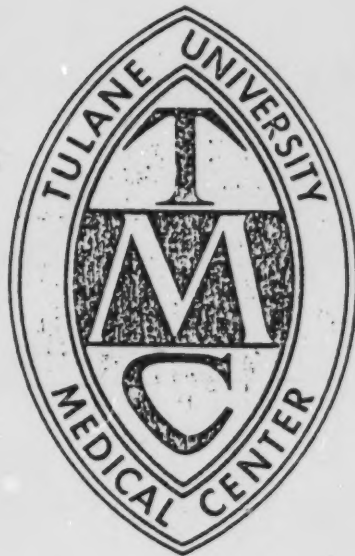
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Final Report

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CONTENTS

FIGURES	vi
TABLES	vii
PREFACE	xii

Chapter

1. INTRODUCTION	1
1.1 Background - Committee on Core Objectives	1
1.2 Historical perspective on MPH Core Objectives	2
1.2.1 Schools of Public Health	2
1.2.2 Tulane School of Public Health and Tropical Medicine (SPHTM)	3
1.3 C.O.C. Survey of Graduates, 1969-1973 (Alumni Survey)	4
1.3.1 Rationale	4
1.3.2 Objectives	6
1.3.3 Organization of the SPHTM 1969-1973	6
1.3.4 Graduates by SPHTM Program	6
2. METHODOLOGY	
2.1 Design and pre-testing of the survey instrument	7
2.1.1 Activities list	7
2.1.2 Additional information	7
2.1.3 Instructions to respondents	8
2.1.4 Pre-tests	8
2.2 Mailings	9
2.3 Coding	9
2.4 Data processing	9
2.5 Data analysis by job	10

3.	SURVEY RESPONSE	11
3.1	Disposition of the Study Population	11
3.2	Structured vs Open-ended Population	12
3.3	Comparison of Respondents and Non-Respondents	12
4.	RESULTS - GENERAL DESCRIPTIVE	13
4.1	Trends, 1969-1973	13
4.1.1	By sex	13
4.1.2	By highest degree at entry	14
4.1.3	By age at graduation	14
4.1.4	By basic professional discipline	14
4.1.5	By professional status at entry	14
4.2	Present Geographic Location	14
4.3	Present Area of Occupational Specialization	15
4.4	Type of Organization for Present Job	15
5.	RESULTS - JOBS HELD BY RESPONDENTS	15
5.1	Present Jobs	15
5.1.1	By job category	15
5.1.2	Job categories by SPHTM Program	16
5.2	Job Movement	16
5.3	SPHTM Program as Preparation for Present Jobs	17
5.3.1	By SPHTM Program	17
5.3.2	By year of graduation	18
5.3.3	By present geographic location	18
5.3.4	By job category	18
5.3.5	Importance of SPHTM degree (s)	19
6.	RESULTS - MAJOR FUNCTIONS	19
6.1	For All Respondents and by Job Category	19
6.2	By Job Group	20
6.3	Other Functions	20

7.	RESULTS - ACTIVITIES: IMPORTANCE TO JOBS	21
7.1	For All Respondents and by Job Category	21
7.2	By Job Group	22
7.3	Other Important Activities	25
8.	RESULTS - FUTURE ACTIVITIES OF IMPORTANCE	25
8.1	For All Respondents and by Job Category	25
8.2	By Job Group	25
9.	RESULTS - SPHTM LEARNING EXPERIENCES IN RELATION TO PRESENT JOBS	26
9.1	Most Valuable Learning Experiences	26
9.1.1	For all respondents and by Job Category	27
9.1.2	By Job Group	27
9.2	Experiences Desired in Retrospect	27
9.3	Least Useful Learning Experiences	29
10.	RESULTS - SUGGESTIONS FOR IMPROVEMENT	30
11.	SUMMARY	30
	REFERENCES	34
	APPENDICES	150
A.	COC Alumni Survey Questionnaire and Cover Letters	150
B.	Source of First Information about the SPHTM	155
C.	Activities Scored High and Low by Job Group	156

FIGURES

1. "Core" Credit Hours as a Proportion of Total Credit Hours
Required for the MPH Degree, SPHTM 1950-51 - 1975-76 35
2. New Activities - Cumulative Percent of Citations vs. Cumulative
Percent of Respondents 36

TABLES

1. Organization of the SPHTM for Academic Years 1968-69 through 1972-73 . . .	37
2. Number of Graduates by Program, SPHTM, May 1969-August, 1973 . . .	38
3. Listing of Job Groups	39
4. Disposition of 457 SPHTM Graduates Receiving Degrees, May 1969- August 1973	41
5. Measures of Response to Open-Ended Questions among 229 Respondents . . .	42
6. Distribution of Graduates, Respondents and Non-Respondents by Year of Graduation	43
7. Distribution of Graduates, Respondents and Non-Respondents by Highest Degree at Entry to SPHTM	44
8. Distribution of Graduates, Respondents and Non-Respondents by Highest SPHTM Degree Conferred, May, 1969 - August, 1973	45
9. Distribution of Graduates, Respondents and Non-Respondents by Most Current Mailing Address	46
10. Distribution of Graduates, Respondents and Non-Respondents by Sex . . .	47
11. Distribution of Graduates, Respondents and Non-Respondents by SPHTM Program or Program Grouping	48
12. Distribution of Graduates by Sex and Year of Graduation	49
13. Distribution of Graduates by Highest Degree at Entry and Year of Graduation	50
14. Mean Age at SPHTM Graduation by Year of Graduation for 263 Respondents .	51
15. Basic Professional Discipline at Entry by Year of Graduation for 270 Respondents	52
16. Professional Status (Health Related) Prior to Entry by Year of Graduation for 270 Respondents	53
17. Present Geographic Location of 270 Respondents	54
18. Present Area of Occupational Specialization for 270 Respondents	55
19. Organization for Present Jobs Held by Respondents	56
20. Job Category of "Present Job" for 270 Respondents	57
21. Job Types for 129 Respondents Categorized as Administrator/Managers . . .	58

22. Job Types for 46 Respondents Categorized as Academician/Teachers . . .	59
23. Job Types for 61 Respondents Categorized as Practitioners	60
24. Job Category by SPHTM Program for 270 Respondents	61
25. Job Category for Jobs Held by Respondents Prior to Entry in SPHTM, Just After Graduation from SPHTM and Present	62
26. Present Job Category by Job Category Prior to Entrance into the SPHTM for 263 Respondents	63
27. Transitional Probabilities from Prior to Present Job Categories . . .	64
28. SPHTM Program as Preparation for Present Job by Program	65
29. Reasons for "No" or "Not Exactly" (Table 25)	66
30. Distribution of Reasons for "No" and "Not Exactly"	67
31. SPHTM Program as Preparation for Present Job by Year of Graduation . .	68
32. SPHTM Program as Preparation for Present Job by Present Location (U.S. vs. non-U.S.)	69
33. SPHTM Program as Preparation for Present Job by Job Category	70
34. Importance of SPHTM Degree(s) in Attaining Present Job by Job Category .	71
35. Importance of SPHTM Degree(s) in Attaining Present Job by Job Group . .	72
36. Listing of Major Functions	73
37. Major Functions Performed by Respondents in Four Job Categories . . .	74
38. Summary of Major Functions Performed by Respondents in Four Job Categories and by All Respondents	75
39. Major Functions Performed by Respondents in 13 Job Groups	76
40. Summary of Major Functions Performed by Respondents in 13 Job Groups .	79
41. Other Major Functions Performed	80
42. Listing of 44 Activities Scored by Respondents for "Importance to Your Job"	81
43. Frequency Distribution of 44 Activities by Score and Percent of All Respondents Giving Low ('1-2'), Middle ('3') and High ('4-5') Scores	84
44. Listing of 44 Activities with Percent Respondents Scoring Low ('1-2') and High ('4-5') for Four Job Categories and All Respondents	85

45. Frequency Distribution of 44 Activities by Percent High ('4-5') and Low ('1-2') Scores for Four Job Categories and All Respondents	87
46. Listing of Activities Scored High ('4-5') by $\geq 50\%$ of Respondents in Four Job Categories and by All Respondents	88
47. Listing of Activities Scored Low ('1-2') by $\geq 50\%$ of Respondents in Four Job Categories and by All Respondents	89
48. Summary of Activities Scored High ('4-5') by $\geq 50\%$ of Respondents in Four Job Categories and by All Respondents.	90
49. Summary of Activities Scored Low ('1-2') by $\geq 50\%$ of Respondents in Four Job Categories and by All Respondents	92
50. Listing of 44 Activities with Percent Respondents Scoring High ('4-5') for 13 Job Groups	94
51. Listing of 44 Activities with Percent Respondents Scoring Low ('1-2') for 13 Job Groups	96
52. Frequency Distribution of 44 Activities by Percent High ('4-5') and Low ('1-2') Scores for 13 Job Groups	98
53. Listing of Activities Scored High ('4-5') by $\geq 50\%$ of Respondents in 13 Job Groups	99
54. Listing of Activities Scored Low ('1-2') by $\geq 50\%$ of Respondents in 13 Job Groups	102
55. Summary of Activities Scored High ('4-5') by $\geq 50\%$ of Respondents in 13 Job Groups	105
56. Summary of Activities Scored Low ('1-2') by $\geq 50\%$ of Respondents in 13 Job Groups	107
57. Listing of 29 Activities Scored High by ≥ 3 of the 6 Administrative/Managerial Job Groups (A, B, C, D, E and H)	109
58. Listing of 9 Activities Scored Low by ≥ 3 of the 6 Administrative/Managerial Job Groups (A, B, C, D, E and H)	111
59. Other Activities of Major Importance Cited by Respondents	112
60. Distribution of Other Activities Citations for All Respondents, Four Job Categories and Job Groups A-E+ H	114

61. New Activities (350 Citations)	115
62. Distribution of New Activities for All Respondents and Four Job Categories	118
63. Distribution of New Activities Citations for 13 Job Groups	119
64. Summary of New Activities Citations by Job Group	122
65. Valuable Learning Experiences - Specific (566 Citations)	123
66. Valuable Learning Experiences - General (154 Citations)	126
67. Distribution of Citations of Valuable Learning Experiences for All Respondents and Four Job Categories	127
68. Distribution of Citations of Valuable Learning Experiences for 13 Job Groups	128
69. Summary of Valuable Learning Experiences in Core Areas, Non-Core Areas and General by Job Group	131
70. Breakdown of Citations of Valuable Learning Experiences in the Administration/Management Area for Job Groups A-E+H Combined . . .	132
71. Experiences Desired in Retrospect - Specific Areas (273 Citations) . . .	133
72. Qualities of Desired Learning Experiences by Core Area and for All Areas	136
73. Experiences Desired in Retrospect - General (103 Citations)	137
74. Distribution of Citations of Experiences Desired in Retrospect for All Respondents and Four Job Categories	138
75. Least Useful Learning Experiences - Specific Areas and General Comments	139
76. Comments on Least Useful Learning Experiences by Core and Non- Core Areas	141
77. Distribution of Citations of Specific Least Useful Learning Experiences by Core and Non-Core Areas for All Respondents and Four Job Categories	142
78. Suggestions for Improvement - Specific (122 Citations)	143
79. Distribution of Specific Suggestions for All Respondents and by Job Category	146

80. Suggestions for Improvement - General (263 Citations)	147
81. Distribution of General Suggestions for All Respondents and by Job Category	149
82. Source of First Information about the SPHTM for 216 Respondents	155
83. Job Group A - Activities Scored High	157
84. Job Group A - Activities Scored Low	158
85. Job Group B - Activities Scored High	159
86. Job Group B - Activities Scored Low	161
87. Job Group C - Activities Scored High	162
88. Job Group C - Activities Scored Low	164
89. Job Group D - Activities Scored High	165
90. Job Group D - Activities Scored Low	167
91. Job Group E - Activities Scored High	168
92. Job Group E - Activities Scored Low	170
93. Job Group F - Activities Scored High	171
94. Job Group F - Activities Scored Low	172
95. Job Group G - Activities Scored High	174
96. Job Group G - Activities Scored Low	175
97. Job Group H - Activities Scored High	177
98. Job Group H - Activities Scored Low	179
99. Job Group I - Activities Scored High	180
100. Job Group I - Activities Scored Low	181
101. Job Group J - Activities Scored High	183
102. Job Group J - Activities Scored Low	184
103. Job Group K - Activities Scored High	186
104. Job Group K - Activities Scored Low	188
105. Job Group L - Activities Scored High	189
106. Job Group L - Activities Scored Low	191
107. Job Group M - Activities Scored High	192
108. Job Group M - Activities Scored Low	193

PREFACE

The Committee on Core Objectives undertook the Survey of Graduates, 1969-1973 (Alumni Survey) in order to provide an empirical data base for partial fulfillment of its charge. The survey results presented in this Report will serve as the starting point in the formulation of recommendations for the MPH core curriculum. The recommendations will be the subject of a separate document to be submitted by the C. O. C. to the Curriculum Committee and distributed to the General Faculty for their comments.

The Report is also meant to serve as a working document for faculty of the various SPHTM instructional programs. As such, it is intended to fulfill the charge to "produce a written document which can be used by the faculty for the purposes of core teaching strategy, course planning and comprehensive exam development."

Finally, it has been possible to assemble a set of tables which describe the student body and certain changes in its characteristics through the time period encompassed by the Alumni Survey. These tables are included in the Report to serve as reference documents for similar tabulations which will be done in the future.

During the course of this project, many individuals have provided assistance, counsel, information and encouragement. The help of the following persons is particularly acknowledged. The initiative for the appointment of a Committee on Core Objectives and the formulation of its charge came originally from Dr. Walter Burnett whose interest and co-operation have been unflagging. Drs. John Walsh and Frank Moore encouraged the project from its outset and approved the expenditures which made it possible. Dr. Shirley Laska was instrumental in the design and numerous revisions of the questionnaire. Dr. Robert Serfling served as first-line critic for text and tables and provided key suggestions for data analysis. Dr. William Bertrand, in addition to enthusiastic encouragement, provided direction for the use of the Mini Tab Programs and sound advice on the construction of codes for the open-ended information. Dr. Dorothy LeBlanc served as a valued consultant for the questionnaire format. Drs. Philip Beckjord, Edward Norman and Athol Patterson answered numerous questions concerning past course offerings,

current whereabouts of graduates and the interpretation of official job titles. Miss Ethel Eaton assumed a major share of responsibility for coding and tabulation. Her patient and meticulous editing resulted in an unusually clean data set. Mr. Michael Tormey volunteered to carry out certain of the hand tabulations. Mrs. Lucy Long served as logistician for all phases of the project from mailings of the questionnaire to duplication of the Report. Miss Linda Taylor, Mrs. Donna Brown and Mrs. Karen Faszold typed and proof read the numerous tables and revisions. All of the persons who served as Committee participants gave generously of their time. They developed the rationale, sought out the background documentation and provided the constructive criticism which brought the Report into its present form.

Finally, the contribution of time and interest by all the alumni respondents is most gratefully acknowledged. Their thoughtful and candid perceptions provided the basis for this document.

1. INTRODUCTION

1.1. Background - Committee on Core Objectives

The ad hoc Committee on Core Objectives (C.O.C.) was first appointed and charged in January, 1974 by the Curriculum Committee (Dr. Walter Burnett, Chairperson). In May, 1974 following administrative changes in the SPHTM, the C.O.C. was re-appointed as a special committee by the Acting Dean (Dr. John Walsh).

The following charge was given to the C. O. C. :

- 1) To develop a complete and exhaustive list of behaviorally stated learning objectives for Master of Public Health core curriculum content. The objectives should be stated independently of current course offerings. Accreditation requirements should be taken into account.
- 2) Each objective will include the following: a statement of
 - a. "what the student will be able to do"
 - b. "how well the student can do it"
 - c. "how will the student's learning be assessed"
- 3) To produce and implement a feedback mechanism which will insure review and comment by the faculty.
- 4) To produce a written document which can be used by faculty for the following purposes:
 - a. core teaching strategy
 - b. course planning
 - c. comprehensive exam development

The initial strategy developed by the C.O.C. for fulfillment of its charge implied the collection of empirical data. It soon became apparent that data collection would be a task of considerable magnitude. Before proceeding further, clarification and reassurances were sought concerning the ultimate disposition of its findings.

The C.O.C. rationale was distributed to the General Faculty for their written comments. With few exceptions, these were favorable and supportive. The implementation of the C.O.C. recommendations was clarified by Dr. Walsh in a memo dated May 1, 1975. The C.O.C. recommendations would be submitted to the Curriculum Committee for their approval. The recommendations of the Curriculum Committee would be forwarded to the Executive Committee for final action. Once the recommendations were approved in final form implementation

would become the responsibility of the Departmental Chairpersons. The Associate Dean would monitor progress and report to the Dean and Executive Committee on progress and problems.

Support and approval of the rationale were then sought and obtained from the Curriculum and Executive Committees (memos dated July 29, 1974 and July 31, 1974 respectively). In addition, each of these Committees was asked to name two of its members to serve on the C.O.C. This request was honored.

Throughout the course of the C.O.C. work, many members of the General Faculty provided information and advice. Their help is gratefully acknowledged elsewhere. It is the hope of the C.O.C. that the Final Report on the Alumni Survey will provide the General Faculty with information which will be of use not only for establishing core curriculum but also for Program curriculum development.

1.2. Historical perspective on MPH core curriculum

1.2.1. Schools of public health

In the United States the first formal guidelines for the preparation of persons seeking the MPH degree were apparently set forth in 1966 by the American Public Health Association (1). These guidelines were based on a common body of historical experience which had evolved since the origins of public health practice in the late 19th century. The existence of an historical consensus is suggested by the first description (2) of the course of study leading to the MPH degree in the Tulane Department of Tropical Medicine and Public Health. This description states the assumption "that a basic training in the principles underlying the approach to public health problems is necessary for future development of the individual, be he teacher, practitioner or one in the research field."

In 1960, a WHO Expert Committee (3) listed 5 essential areas of public health training: public health administration, health statistics, epidemiology, environmental health and microbiology. The 1966 APHA Guidelines for Accrediting Schools of Public Health (1) specified that competency in the following areas should be demonstrated before the MPH degree was awarded:

- 1) The nature of man, his physical and social environment, and his personal and social interaction--as they affect his health

- 2) The basic techniques of investigation, measurement, and evaluation, including biostatistics and epidemiology.
- 3) The basic techniques of administration (organization and management); particularly as applicable to comprehensive health care programs.
- 4) The economic and political setting relevant to health services.
- 5) The application of these knowledges in the promotion of community health.

In 1975, the Council for Education in Public Health in the Manual for Accreditation for Schools of Public Health (4) restated the competency requirements in the form of learning objectives:

- 1) An understanding of
 - a. the biological, physical, and social factors which affect the health of the community
 - b. relevant concepts from appropriate social and behavioral sciences; and
 - c. the components and operations of health service delivery systems, including facilities and manpower.
- 2) Proficiency in the techniques of
 - a. information collection, storage, retrieval, analysis, and dissemination; and
 - b. environmental monitoring, analysis, and manipulation.
- 3) Skills in the application of these understandings and techniques to the solution of community health problems.

It is to be noted that explicit statements of how competency was to be attained were not given in either of the accreditation documents. It appears that among schools of public health, there has been considerable variability in "core" requirements for the MPH and that "core" requirements have varied through time within individual schools (5).

1.2.2. Tulane School of Public Health and Tropical Medicine (SPHTM)

Required courses in the traditional core areas of environmental health, epidemiology, biostatistics, and public health administration have characterized the MPH curriculum in the SPHTM since its inception in 1948. The relative number of credit hours required in each area has varied considerably through time although prior to 1972-73, fewer hours were consistently required in environmental health than in the other 3 areas.

From course descriptions in the bulletins, it is evident that the content of

required courses in these areas has undergone considerable modification. The proportion of total MPH credit hours devoted to core courses has also varied through time as shown in Fig. 2. With the exception of 1966-67, the trend since 1964-65 had been downward.

Changes in required courses which have occurred since 1948 include: a course titled "Physiologic and Mental Hygiene" which was dropped as a requirement in 1956-57; the environmental health area (previously called Sanitation) included an "Intramural Field Training" course which was dropped in 1962-63; one or more courses in "Health Education" were required through 1961-62; microbiology and parasitology under several different titles were required through 1967-68. Also required for periods of 1-3 years were courses in population and a course titled "Man and his Social Environment". It is likely that the SPHTM has been no more (or less) consistent than most other schools of public health in its "core" requirements for the MPH degree.

1.3 C.O.C. Survey of Graduates, 1969-73 (Alumni Survey)

1.3.1 Rationale

The charge to the C.O.C. specified the development of learning objectives for the Master of Public Health core curriculum. At the outset, it was necessary for the C.O.C. to define the purpose of the MPH degree and those characteristics which distinguished it from the MSHyg. degree. The following working definitions were adopted in consultation with Dr. Burnett.

- 1) The MPH degree is that degree given to students educated to assume primarily administrative/managerial responsibilities for some activity promoting or maintaining human health.
- 2) The MSHyg degree is that degree given to students educated to assume primarily scientific/service responsibilities for some activity promoting or maintaining human health.

The C.O.C. then restated its principal charge in the form of a question: "Regardless of the nature of the health activity and the society in which it is carried out, can we identify a generic body of skills and knowledge which would be useful to any health administrator/manager educated during the next 3-5 years?"

As its deliberations proceeded, the C.O.C. agreed on several very broad assumptions which applied not only to students in administrative programs but to all students.

- 1) The primary purpose of the SPHTM is to provide an educational experience which will enable our students to function effectively in jobs related to the promotion and maintenance of human health (i.e., in health related jobs).
- 2) In order to modify our curriculum so as to maximize our students' ability to function effectively, we should look at the current demands (since these change with time) of health related jobs. This feedback process should, in fact, be done periodically.

At this point, the Committee realized that there was no assurance that the graduates of either administrative or non-administrative programs did indeed enter the kinds of jobs for which their SPHTM programs were meant to prepare them. There was in fact no complete or up to date information about what kind of jobs our recent graduates held. Another assumption was made:

- 3) Our in-coming students for the next several years would enter jobs which were similar to those now held by our recent graduates.

The decision was then made to survey graduates from the years 1969-73 since these persons were both relatively recent students and relatively recent job holders. The intent of the survey would be firstly to determine what types of jobs these graduates presently held and then to determine what functions and activities were important in these jobs. A question regarding important future activities would be included in an effort to anticipate change and possibly as a basis for continuing education activities. The Committee also wanted to relate the SPHTM experience of our graduates to their present jobs. Was their SPHTM preparation adequate? What learning experiences had proved to be most useful? In retrospect, what learning experiences would have been useful? What SPHTM experiences had not proved useful thus far in their careers?

It was anticipated that those jobs which were primarily administrative/managerial in nature (and thus consonant with C.O.C. definition of the purpose of the MPH degree) could be identified by analysis of the survey data. The responses of persons holding such jobs would then provide a partial basis for formulating MPH core curriculum learning objectives.

It was fully realized that while such a survey might provide alumni perceptions of what was and was not important or useful in their jobs, the judgement of what a "well-educated", health professional ought to know had another basis, namely the perceptions of the faculty. Faculty perceptions were explored in a companion survey of SPHTM faculty members carried out concurrently with the alumni survey. The results will be reported at a later time.

1.3.2 Objectives

The primary objectives of the Survey of Graduates (hereafter called the C.O.C. Alumni Survey) were to determine for SPHTM graduates from May, 1969-August, 1975

- 1) what jobs these alumni held at the time of the survey
- 2) what major functions they performed in these jobs
- 3) what activities were important in their jobs
- 4) what activities would become important in the near future to persons in jobs like theirs
- 5) what SPHTM learning experiences
 - a. had been most useful to them as preparation for their jobs
 - b. would, in retrospect, have been valuable as preparation for their jobs
 - c. had been least useful to them thus far in their careers
- 6) suggestions for improvement of the SPHTM learning experience

1.3.3 Organization of the SPHTM 1969-73

The survey period encompassed the academic years 1968-69 through 1972-73. During this time, some re-organization had occurred and the names of several Department and Sections (hereafter called Programs) had been changed. These modifications through time can be seen in Table 1 which was based on information contained in the SPHTM catalogues.

1.3.4 Graduates by SPHTM Program

From the SPHTM catalogues for 1970-71 through 1973-74 and the Commencement Program for 1973, names were obtained of all 457 persons who had received a SPHTM degree during the survey period. The records of the Office of Admissions provided the SPHTM Program in which the degree had been awarded.

If two degrees (e. g. Master's and Doctorate) had been awarded during the survey period, the second of the two degrees was chosen for tabulation. The distribution of graduates by SPHTM Program is shown in Table 2. During the survey period, the Programs in Environmental Health, Epidemiology, Public Health Administration and Public Health Nursing accounted for some 50% of the graduates. In subsequent analyses, related Programs with small numbers of graduates have been combined to achieve greater stability of numbers and to preserve the confidentiality of respondents.

2. METHODOLOGY

2.1 Design and pre-testing of the questionnaire

The questionnaire (Appendix B) was designed by the C. O. C. with consultation from Dr. Shirley Laska.

2.1.1 Activities list

A major portion of the questionnaire was devoted to a listing of 44 activities which were to be rated by the respondents as to "importance to your (present) job." In view of the charge to the C. O. C., most (29) of the activities were related to the administrative/managerial role and the remainder (15) were general activities related to public health.

The C. O. C. began with an initial listing of 56 activities derived from several sources. These included: working documents from a previous SPHTM Committee on Evaluation of Core Curriculum and the Kellogg Foundation Commission on Education in Health Administration; curriculum planning documents from the SPHTM Community Mental Health Specialist Graduate Program and the University of Southern Illinois Master's Program in Health Administration; and a doctoral dissertation, "Curriculum Revision in a School of Public Health: A Rationale and a Process," by a C. O. C. member (S. T. K.). The initial listing was shortened and the content considerably revised on the basis of pretest results and the comments and suggestions of the General Faculty solicited through Department Chairpersons and Section Heads.

2.1.2 Additional information

In addition to the information required to fulfill the primary survey objectives as stated above, certain other items of information were sought. These included:

- a. personal information: sex, year of birth, citizenship at SPHTM entry.
- b. basic professional discipline at SPHTM entry. This was included as

one measure of the professional background of the student body.

c. present area of occupational specialization. It was considered that this might be different from (b), from the SPHTM Program and from the area indicated by the title of the present job.

d. all earned academic degrees. This was included as another measure of professional background.

e. employment prior to SPHTM entry and just after graduation as well as present job. Although the questionnaire was structured around "your (present) job", job information for these two additional points in time would make possible some description of job mobility and the career maturation process. Job prior to entry served as an additional measure of professional background.

f. usefulness of the SPHTM degree in attaining the present job.

g. source of first information about the SPHTM - included for use in future student recruitment strategy.

2.1.3 Instructions to respondents

Alumni who had never been employed since graduation and those who preferred not to complete the entire questionnaire were requested to complete just the first two pages. Since 6 of the 7 items listed above under "Additional Information" were contained on these pages, a considerable amount of information was obtained for persons who were either not eligible to complete or who opted not to do so.

2.1.4 Pre-tests

A first draft of the questionnaire was pre-tested on 3 alumni who were not in the study population. Completion required 2-3 hours and suggestions and comments obtained by personal interview were used for revision.

A considerably shortened version of the questionnaire was pre-tested on a stratified random sample of 20 alumni, 4 from each of the 5 survey years. The response rate, 70%, was encouraging and the questionnaire now required a mean time of 30 minutes for completion. These 20 persons were later excluded from the survey proper.

Following revisions based on the second pre-test, the final version of the questionnaire (dated 9/23/74) and the cover letter were submitted for approval to the TMC Committee on Use of Human Subjects.

2.2 Mailings

The questionnaire with an individually typed and signed letter was mailed in late October, 1974 to 437 alumni. The primary source of mailing addresses, the SPHTM Alumni file, was supplemented by Department and Section records and by extensive inquiries to individual faculty, alumni and current students.

Individual follow-up letters were sent to non-responders one month after the initial mailing. A second copy of the questionnaire with a modified cover letter was mailed to the remaining non-responders in mid-January, 1975.

2.3 Coding

The questionnaire contained numbered spaces for coding but was not pre-coded. Four card codes and 15 supplemental "category codes" were used. The latter included classifications of geographic location, jobs, academic degrees, academic programs and responses to open-ended questions based on pre-test responses.

Coding was done by two persons, a primary (D.I.C.) and a secondary (E.L.E.) coder. The primary coder reviewed all coding done by the secondary coder and made the final decision in cases of disagreement. No formal consistency checks were made. An effort to maintain a high level of consistency was aided by frequent back checks, and the formulation of rules to handle recurring problems.

2.4 Data processing

Questionnaire data was punched and verified on four standard 80 column IBM cards. A fifth card contained Alumnus Identification information from SPHTM sources and response to the questionnaire (address unknown, non-respondent, respondent-2 pages only, etc.). This card was linked to the four questionnaire cards by a pre-assigned I.D. number.

Mini-Tab programs were used for initial editing and the preparation of basic frequency distributions and contingency tables. Specific programs, written in Fortran, provided tabulations required for manual preparation of the remaining tables. An IBM 7044 was used throughout.

2.5 Data analysis by job

The focal point of the Alumni questionnaire was the job presently (or most recently) held by the respondent. "Your (present) job" was the most important of the independent variables used in data analysis. The following schema were devised to group together jobs which had certain characteristics in common.

Job classification was based on the complete job title and the organization in which the individual was employed. In classifying a job, a decision was first made as to whether the job was or was not health-related or whether there was insufficient information to make this decision. A job was regarded as health-related if either the organization or the job were health-related, or both.

If health-related, the decision was made as to whether the job was primarily administrative/managerial, research, teaching (either academic or training), consultant or practitioner. The "practitioner" category was used for jobs which were not primarily administrative/managerial, research, etc. but simply the practice of activities for which the respondent was equipped. Examples would be the practice of clinical medicine, public health nursing, social work, epidemiology, etc. This information was encoded in the first digit of a 3 digit job classification and termed the "Job Category".

The second and third digits encoded more specific information about the job. If a job was primarily administrative/managerial, what did the respondent administer or manage? Possible answers encompassed nursing, laboratory sciences, family planning, environmental health. The same questions were asked for jobs which were classified as primarily research (what did the respondent research), practitioner (what did the respondent practice) and consultant (in which area did the respondent consult). In each case, the more specific information was encoded in the second and third of the 3 digits. The 3 digits taken together are termed the "Job Type" and are to be distinguished from the more general first digit

"Job Category".

Job Categories, because they were broad groupings, were somewhat heterogeneous in nature. The Administrator/Manager Job Category for example contained educational administrators as well as hospital administrators. The Practitioner Job Category contained both practicing physicians and sanitarians. The Job Types on the other hand were too specific to be useful in data analysis. Eighty three job types were identified, many represented by less than 5 respondents. An intermediate classification, the Job Group, was introduced. The 83 Job Types were grouped empirically into 13 Job Groups which were given the letters A through M. The Job Groups are described in Table 3 with typical examples of the jobs included in each.

Job Groups A-E include respondents whose jobs were directly concerned with the administration, management and/or planning of health services, health facilities and disease control or prevention programs. Groups F and G are practitioners concerned with the provision of actual services or care to individual persons. Groups H and I are respectively administrators/managers and practitioners concerned with environmental health. Group J is composed of other types of scientists or researchers, primarily laboratory scientists or epidemiologists. Groups K, L and M are academicians and educators. Persons holding non-health jobs were excluded from the Job Group classification.

3. SURVEY RESPONSE

3.1 Disposition of the study population

As shown in Table 4, a total of 457 persons received 1 or more degrees from the SPHTM during the study period. Despite repeated attempts current mailing addresses were never determined for 20 graduates, 4.4% of the total. Exclusion of these persons plus the pre-test sample of 20 alumni left 417 potential respondents.

Among potential respondents, 270 (64.7%) responded and of these, 229 completed more than the first 2 pages of the questionnaire. Of the 41 who completed only the first 2 pages, 3 were not eligible to do so since they had never been employed since graduation. The remainder (38) were eligible but chose not to answer the entire questionnaire.

3.3.2 Response to structured vs. open-ended questions

Almost all 229 respondents completing more than the first two pages of the questionnaire answered each of the structured questions dealing with Major Functions and activities. Of all the survey data therefore, the Major Function and Activity data can be considered to best represent the perceptions of the respondents.

Fewer respondents elected to answer one or more of the five major open-ended questions. The maximum number of answers (hereafter called "citations") which were coded for each question ranged from 3 for "Least Useful Experiences" to 7 for "Valuable Learning Experiences". Some measures of response are shown in Table 5.

With the exception of the question regarding "New Activities", at least 75% of the 229 respondents answered each question. The highest response rate (87.7%) was observed for the question dealing with "Valuable Learning Experiences". This was also the question which elicited the largest number of citations with a mean of 3.6 citations per respondent giving any citation.

For each open-ended question, an ogive was prepared by plotting the cumulative percent respondents against the cumulative percent of citations as shown in Figure 2 for "New Activities". From the ogives, it was determined that 50% of the total citations for 4 of the 5 questions were given by approximately 78% of the respondents (Table 5). The remaining 50% of the citations were therefore given by 22% of the respondents. Although the 22% were not necessarily the same individuals for each question, it was apparent from casual inspection that some persons consistently gave several citations while others consistently gave a minimal number or none. Thus, it should be recognized that relatively few respondents may be disproportionately represented in the tabulations of responses to the open-ended questions.

3.3.3 Comparison of respondents and non-respondents

The 270 respondents were compared with the 147 non-respondents to determine whether the latter differed significantly from those alumni who chose to respond. The differences in distributions of 6 variables were tested for significance using a 2 x k Chi-Square. For each variable, the distribution for All

Graduates (457) is also shown.

The differences in distributions of respondents and non-respondents were not significant for year of graduation, highest degree at entry and highest SPHTM degree conferred (Tables 6, 7 and 8). Some points of interest in these Tables are: the trend toward increasing numbers of graduates (Table 6); the overall proportion of persons holding the doctorate at entry (35%, Table 7); and the predominance of the MPH degree among degrees awarded during the survey period (Table 8). The ratio of MPH to MPH-TM degrees was 5:1 and to MSHyg) degrees, 3:1. The MPH-TM degree had been offered since the inception of the SPHTM while the MSHyg degree was first offered in 1965-66. Not shown in the Table is the fact that 11 SPHTM graduates were in a combined MD-MPH (or MSHyg) Program.

The distributions of respondents and non-respondents by most current mailing address (Table 9) were significantly different ($p = .003$) with overseas alumni under-represented among the respondents. By sex (Table 10), females were over-represented among respondents ($p = .035$). Differences in distribution by SPHTM Program (Table 11) were also significant ($p = .030$) with a better response among graduates of the International Health, Mental Health and Public Health Nursing Programs. Although it was felt that these differences were not sufficiently serious to invalidate the survey results, they nevertheless must be kept in mind when interpreting the data.

4. RESULTS - GENERAL DESCRIPTIVE

4.1 Trends, 1969-1973

It was of interest to examine certain characteristics of the SPHTM student body throughout the time period encompassed by the survey. Where possible, these analyses are based on the study population of 457 graduates. Where data was not available for the entire study population, analysis is based on the 270 respondents.

4.1.1 By sex

Table 12 indicates that the number of female graduates remained fairly constant during the 5 year period while the number of male graduates tended

to increase. Overall, the male-female ratio was 2.6:1.

4.1.2 By highest degree at entry

Although the number of graduates who held the doctorate at entry showed some tendency to decrease during the survey period, a definite decrease in the proportion of such persons was apparent in successive years (Table 13). This was the result of increasing numbers of persons entering with Master's and Bachelor's degrees.

4.1.3 By age at entry

Based on the year of birth for the 263 respondents, a possible trend toward decreasing mean age at graduation is seen in Table 14. The mean age in 1969 was 35.6 years compared to 33.1 years in 1973.

4.1.4 By basic discipline at entry

Based on 270 respondents, the proportion of persons entering the SPHTM with "scientist" background remained fairly constant (Table 15). The proportion of persons (although not the number) in the traditional health related disciplines tended to decline however and a definite increase can be noted in both the numbers and proportion of persons who entered with no health related basic discipline.

The data as shown may be conservative. This is because persons claiming a basic discipline (e.g. sanitarian) on the basis of as few as 1 or 2 years of work experience were placed in the "licensure or experience" category.

4.1.5 By professional status (health related) at entry

"Professional Status" (Table 16) was devised to take into account health related job experience as well as health relatedness of academic degrees. The same trends are apparent as in Tables 13 and 15, namely an increasing number and proportion of students without academic background or experience in the health related sciences.

4.2 Present geographic location

Table 17 based on present address of the 270 respondents suggests that the SPHTM is providing many health workers to Louisiana (24.8%) and 8 surrounding states. (22.2%). Overall, some 22% of the respondents were residing outside the United States with the largest number located in Asia, primarily in South-East Asia.

4.3 Present area of occupational specialization

Four major categories of occupational specialization accounted for some 70% of the respondents (Table 18). These were: administration of programs and facilities (22.6%); personal services in a public health or community oriented setting (18.5%); personal services without any particular public health or community orientation (15.9%); and environmental health (13.3%). Specialists in epidemiology and in health planning together accounted for an additional 16%.

4.4 Type of organization for present job

Table 19 displays the types of organizations in which the respondents were presently employed. Nearly 40% were employed in official organizations, most at the state or federal level. Some 25% were employed in universities or 4 year colleges and 16.9% were in the private sector, mostly in health service provider organizations such as hospitals. A substantial proportion, 11.9%, were in the military services.

5. RESULTS - JOBS HELD BY RESPONDENTS

5.1 Present jobs

In the survey questionnaire, respondents who were not currently employed were asked to provide information about their most recent post-graduation job. Twenty two persons elected to do so and four did not. The latter were grouped with 3 additional persons who had never been employed since graduation to give a total of 7 persons classified as "not employed" (Table 20). Thus, of the 261 persons who provided job-related information, 239 (92%) answered the survey questions in reference to the job they presently held. In subsequent analysis, no distinction is made between these 2 groups and the term "your job" or "your (present) job" includes both "most recent" and "present" jobs.

5.1.1 By job category

Present jobs held by respondents are broken down into broad Job Categories in Table 20. Nearly 50% held jobs classified as primarily Administrative/Managerial and another 23% were classified as Practitioners. A substantial proportion, 17%, were primarily Academician/Teachers and most of the remainder were Consultant/Advisors (6.3%). Many of the subsequent tables refer to these 4 Job Categories. The remaining Job Categories (Non-health related and Research)

contained so few respondents that separate analysis was not warranted. Their responses are however included under "All Respondents".

Detailed listings of Job Types within the Administrative/Managerial, Academic/Teacher and Practitioner Job Categories are shown in Tables 21, 22 and 23. A similar breakdown for the Consultant/Advisor Job Category is not shown since it contained some 14 Job Types ranging from consultants in nursing education to consultants in occupational health and no one job type was represented by more than 3 respondents.

Table 21 shows that the largest proportion of Administrator/Managers were concerned with the administration or management of health related programs. Among Academician/Teachers, Table 22, the majority were concerned with patient care either with a public health orientation (e.g. public health nursing) or without (e.g. nursing). Among Practitioners, Table 23, 36% were concerned with patient care in a non-public health setting. These were primarily physicians, often residents, engaged in the practice of clinical medicine. The next largest category of Practitioners were those employed in the environmental health sciences.

5.1.2. Job category by SPHTM Program

A cross-classification of graduates by SPHTM Program and Job Category is shown in Table 24. For 6 Programs (or Program groupings) the majority of graduates held jobs which were judged to be primarily Administrative/Managerial. These were the Epidemiology-Biostatistics grouping, the HA-HSA-HMD grouping, International Health, the MCA-Chronic Disease grouping, PHA and the Tropical Medicine-Parasitology grouping. A considerable proportion of graduates from the F.P.-P.S.-MCH grouping, Mental Health and Public Health Nursing were holding jobs as Academician/Teachers. The highest proportion of Practitioners were found among the graduates of Environmental Health (41%) and Nutrition (50%).

5.2. Job movement

Since information was also collected for jobs held just prior to entry and just after graduation, it was possible to compare Job Category distributions for these earlier points in time with the Job Category distribution for presently held jobs. This is done in Table 25 where it would appear that the SPHTM is turning

Practitioners into Administrator/Managers and to a lesser extent into Academician/Teachers.

Job movement is explored further in Table 26 which presents a matrix of Job Category in job prior to entry vs. Job Category in present job. Here, it can be seen that the majority of respondents who were in non-health positions prior to entry are currently classified as Practitioners. Three quarters of the Administrator/Managers returned to administrator/manager jobs as did some 70% of the Teachers to teaching jobs. The largest shift in Job Category was observed among the Practitioners with some 43% entering Administrative/Managerial jobs and only 33% remaining as Practitioners.

A similar picture is obtained when movement among four major Job Categories is summarized as a series of transitional probabilities (Table 27). Again, Administrator/Managers appear to be the most stable group followed by Academician/Teachers. The highest probabilities of shifts among categories are from Non-Health to Practitioner and from Practitioner to Administrator/Manager.

5.3 SPHTM Program as preparation for present job

It was recognized that the present job held by respondents could be the outcome of many factors such as the availability of jobs, and the career maturation process. It was of interest therefore to determine what proportion of the recent graduates were actually employed in jobs which were related to their SPHTM Programs.

5.3.1 By SPHTM Program

The response to the question "would you say that your SPHTM Program was intended as preparation for your (present) job" is shown in Table 28 by Program and for All Respondents. Overall, of the 3 possible answers to the question, 54% checked "yes", 12% "no", and the remainder, 34%, "not exactly". Among the various Programs, the proportion of graduates indicating "yes" ranged from 30% to 70%. Many of the Programs however were represented by small numbers of graduates.

Respondents who checked "no" or "not exactly" were asked to explain their answers. The reasons for "no" or "not exactly" are categorized in Table 29 where it can be seen that they fell rather evenly under 4 major headings. When "reasons" were analyzed separately for respondents answering "no" and "not exactly" (Table 30), half the "no's" were because of unanticipated job change or no program related job available" while the "not exactly's" were predominantly

"job and program don't quite match".

5.3.2. By year of graduation

It was hypothesized that as a result of career maturation, the proportion of "no's" and "not exactly's" might increase with elapsed time since graduation. This did not appear to be the case (Table 31). Neither did there appear to be an increased proportion of "unanticipated job change" or "job and program don't quite match" among the earlier graduates. Possibly the maximum time interval since graduation was too brief to observe such trends. It was noteworthy however, that the proportion of respondents citing "program deficiency" appeared to decrease among the more recent graduates.

5.3.3. By present geographic location

In Table 32 the response of graduates presently located overseas (primarily international students) is compared with that of graduates located in the United States. A higher proportion of overseas graduates indicated that their SPHTM programs were intended to prepare them for their present jobs.

Also shown in Table 32 are the ratings given by graduates to their SPHTM programs as preparation for their jobs. The rating scale ranged from "1 - little knowledge of value" through "3 - some useful knowledge" to "5 - much essential knowledge". A higher proportion of overseas than U.S. graduates rated their programs "4" or "5". This was true for all overseas graduates as well as those who perceived their jobs as directly related to their SPHTM Programs (the "yes" respondents).

5.3.4. By Job Category

The same data is analyzed by Job Category in Table 33. Practitioners had the highest percentage of respondents answering "no" or "not exactly" to the question concerning their Programs as preparation for their jobs. Analysis of reasons for "no" or "not exactly" was not contributory in explaining this observation, the distribution of reasons being similar in each of the 4 Job Categories. The proportion of Practitioners giving their Programs high ratings as preparation for their present jobs was also lower than for the other Job Categories.

5.3.5. Importance of SPHTM degree

A structured question regarding the importance of the SPHTM degree in attaining "your (present) job" was included in the first 2 pages of the questionnaire and was thus answered by almost all of the 270 job holding respondents. The responses for persons holding health-related jobs were analyzed by Job Category (Table 34) and Job Group (Table 35).

Some 20% of respondents considered the SPHTM degree a prerequisite for their present job. An additional 39% felt the degree was an important qualification and 12% perceived the degree as not important (Table 34). The proportion viewing their degree as a prerequisite was particularly high among Job Group A respondents, the administrator/managers of health facilities, and Job Group M, the teachers of sciences (Table 35). Not unexpectedly, a high proportion of Job Group F respondents, primarily practicing physicians, viewed their degree as not important in attaining their present job.

6. MAJOR FUNCTIONS

Tables 37 - 41 answer the C.O.C. question concerning the Major Functions performed by our graduates in their jobs. Table 36 lists the Major Functions as they were given in the questionnaire. In addition to analysis for All Respondents, Major Functions have been analyzed by Job Category and Job Group. Each analysis consists of 2 tables. The first table presents the numeric data. The second table is a summary of the most important functions as determined by the percentage of respondents performing the function and percent of work time devoted to the function by persons performing it. In the summary tables, those functions performed by $\geq 50\%$ of respondents are denoted by one asterisk (*). Those functions which were not only performed by $\geq 50\%$ of respondents but also occupied $\geq 10\%$ of their work time are denoted by two asterisks (**).

6.1. For All Respondents and by Job Category

Analysis for All Respondents (Tables 37 and 38) indicates that with the exception of personal services, $\geq 50\%$ performed each of the Major Functions with administration/management occupying the highest median percentage of

time (20-29%). Among Administrator/Manager respondents the administrative/managerial function emerged as most important being performed by 97% and occupying a median 40-49% of their work time. Supervision was also performed by a high percentage (84%) and occupied 10-19% of work time. Liason, program evaluation, research and teaching were performed by $\geq 50\%$ but occupied $\leq 10\%$ of work time.

6.2 By Job Group

Analysis by Job Group is shown in Tables 39 and 40. Administration/management was an important function for each of the 13 Job Groups being performed by $\geq 50\%$ of respondents in each Group and occupying $\geq 10\%$ of work time for those who performed it. For Job Groups A, B, C, D, E, and H however, the administrative/management function appeared to be the most important of the 8 Major Functions listed. For each of the remaining Job Groups, another function was dominant (e.g. teaching, research, personal services). Since the C.O.C. had defined the MPH degree as "that degree given to persons educated to assume primarily administrative/managerial responsibility for some activity promoting or maintaining human health", special consideration was given to the responses of persons in Job Groups A-E and H as best representing persons who functioned primarily as administrator/managers. It should be noted that these 6 Job Groups (combined = 135) overlapped for the most part with the Admin/Man Job Category (n = 129) with 112 respondents in common. Job Groups A-E + H contained in addition 15 Consultants and 8 Practitioners. The latter were planners of health services or facilities.

Among Job Groups A-E + H, consultation and supervision emerged as additional important functions. Liason, program evaluation, research and teaching while performed by $\geq 50\%$ of respondents in at least 5 of the 6 Job Groups, were generally less important in terms of time devoted to them.

6.3 Other functions

In the Alumni questionnaire, 2 spaces were provided for respondents to name other major functions they performed as part of their jobs. Forty-nine respondents cited a total of 61 additional functions and these are categorized in Table 41.

7. RESULTS - ACTIVITIES: IMPORTANCE TO JOBS

Respondents were asked to rate each of 44 listed activities on a scale of 1 - 5 ranging from "1 - lesser importance" through "3 - moderate importance" to "5 - great importance." Twenty-nine activities were listed under the heading "Activities Related to Management/Administration" and an additional 15 were termed "General Activities Related to Public Health." The activities are shown in Table 42 as they appeared in the Alumni questionnaire. In succeeding Tables an abbreviated form of wording is used or the activities are designated by number.

The activity scores were analyzed for All Respondents, by Job Category and by Job Group. Each analysis consists of 4 types of tables.

1. The numeric data for each activity as percent of respondents scoring the activity high ('4 - 5') and low ('1 - 2').
 2. A frequency distribution of the number of activities scored high and low by percentage of respondents. These tables serve as an "index of agreement" among respondents. For All Respondents or any specified subgroup it is possible to determine how many activities were scored high (or low) by any given percentage (e.g. $\geq 50\%$) of respondents.
 3. A ranked listing of activities scored high by $\geq 50\%$ of respondents and scored low by $\geq 50\%$ of respondents. The first activity listed was scored high (or low) by the highest percentage of respondents. The second activity listed was scored high (or low) by the next highest percentage of respondents. From these tables, it is possible to determine for any given subgroup of respondents those activities for which there was the highest degree of consensus as to their importance (or lack of importance) in relation to "present job".
 4. A summary of most and least important activities.
- Any activity scored high or low by $\geq 50\%$ of respondents is indicated by an "X". These tables serve both as a summary for Job Categories or Groups and as a summary for each activity across Job Categories or Groups.

7.1. For All Respondents and by Job Category

Analysis of activity scores for All Respondents and for 4 Job Categories

is shown in Tables 43 - 49. In Table 43 the distribution of activities scored '1 - 2', '3', and '4 - 5' is shown by percentage of All Respondents. The clustering of activities scored '3' into two rather low percentage categories, 10.0 - 19.9% and 20.0 - 29.9% suggests that our respondents did not hesitate to express either their positive or negative perceptions. The fact that the central tendency of the high ('4 - 5') score distribution lies well to the right of the low ('1 - 2') score distribution indicates that in general the activities were viewed by the respondents as having greater rather than lesser importance in their present jobs. In the Tables which follow, the percentage of respondents scoring an activity '3' is omitted and only the percentages giving high ('4 - 5') or low ('1 - 2') scores are shown. The missing percentage can be calculated for each activity by adding together the percentages of high and low scores which are shown in the "type 1" tables and subtracting from 100%.

The percent of All Respondents and respondents in 4 major Job Categories scoring each activity high and low is shown in Table 44. Table 45 illustrates the variation in the number of activities scored high and low by respondents in different Job Categories. While 19 activities were scored high by $\geq 50\%$ of All Respondents, 25 activities were scored high by $\geq 50\%$ of Administrator/Managers and only 3 activities by $\geq 50\%$ of Practitioners. Considering low scores, 6 activities were scored low by $\geq 50\%$ of All Respondents, 4 by Administrator/Managers and 16 by $\geq 50\%$ of Practitioners.

The listing of activities in Table 46 indicates that activity 'a9', "using appropriately power, persuasion, influence and collaboration to help your program achieve its goals" received the highest percentage of high ('4 - 5') scores among All Respondents and respondents in 3 of the 4 Job Categories. In Table 47, activity 'a19', "using cost control data for the day to day management of your program" leads the low score list for All Respondents and 2 of the 4 Job Categories. In the remaining Job Categories 'b4', "understanding the differences and similarities of health problems in developed and developing countries" led the list.

A summary of activities of greater importance is given in Table 48 where activities scored '4 - 5' by $\geq 50\%$ of respondents are indicated by an "X". A summary of activities scored low is shown in Table 49.

7.2. By Job Group

Tables 50 - 56 present a similar analysis for Job Groups A-M. As stated above, special note will be taken of responses for Job Groups A-E plus H. The percent of respondents scoring each activity high and low is shown in Tables 50 and 51 respectively. The frequency distribution of number of activities scored high and low (Table 52) shows considerable variation among the Job Groups. Again using the 50% cutpoint, Groups C and D, the administrator/managers of community oriented programs and services and Groups K and L, teachers of patient care and "public health" gave high ratings to the largest number of activities and low ratings to the smallest number. Group F, composed largely of physicians concerned with patient care and Group I, environmental health practitioners, showed a reverse pattern with only 6 activities rated high by $\geq 50\%$ and 21 activities rated low by $\geq 50\%$.

An indication of greater homogeneity within Job Groups as compared to Job Categories is suggested by comparing Tables 46 and 53. Within Job Groups, there are many examples of activities scored high by $\geq 80\%$ of respondents as compared to Job Categories within which no activities were scored high by $\geq 80\%$ of respondents. A similar phenomenon is seen when Tables 47 and 54 are compared, using $\geq 70\%$ scoring low as an indicator. An expanded version of Tables 53 and 54 with the activities written out in full is presented in Appendix C.

A summary of activities rated high and low by $\geq 50\%$ of respondents in each Job Group is given in Tables 55 and 56 respectively. An effort was made to identify those activities which might be considered "generic" among Job Groups A-E plus H. These activities could be either of generic greater importance or generic lesser importance. The criterion used was agreement among at least 3 of the 6 Job Groups. Using this criterion, an activity was considered of generic greater importance if $\geq 50\%$ of the respondents in at least 3 of the 6 Job Groups rated it high ('4 - 5'). An activity was considered of generic lesser importance if $\geq 50\%$ of respondents in at least 3 Job Groups rated it low ('1 - 2').

Twenty-nine activities of generic greater importance were identified for the administrative/managerial Job Groups (A-E plus H). These are shown in Table 57 where they are grouped according to the number of Job Groups scoring them high. Four activities were scored high by all 6 of the Job Groups. These

consisted of 'a9' (using appropriately power, persuasion, etc.) and three activities dealing with program administration, namely setting goals, evaluating progress toward goals and program feedback. The second set of 7 activities scored high by 5 of the 6 Job Groups concern primarily interpersonal skills: use of the interdisciplinary team and management of work relationships. Also included are awareness of cultural differences in consumer populations and concepts of health services planning. A third set of 10 activities scored high by 4 Job Groups include 7 which are concerned with the organization - community interface. These are collecting, analyzing, interpreting and reporting of health related information, the assessment of community health needs, planning programs to meet needs, relationships to community health professionals, health legislation, financing and manpower distribution. The remaining 3 deal with internal organizational concerns: budget, structure and personnel. The final set of 8 activities rated high by 3 Job Groups are evenly divided between "Activities Related to Management/Administration" and "General Activities Related to Public Health". The latter include crisis care vs. health maintenance care, environmental hazards, the use of existing health statistics and causal agents or risk factors for common diseases of man.

The list of 9 activities rated low by ≥ 3 of the 6 administrative/managerial Job Groups is shown in Table 58. There were no activities scored low by $\geq 50\%$ of respondents in all 6 Job Groups. Among the activities scored low by 3, 4 or 5 Job Groups were several which could be considered traditional to public health curricula. These were health problems in developed as opposed to developing countries (scored low by 5 Job Groups), interpretation of standard biostatistical measures and tests of inference (4 Job Groups), using epidemiologic methods (3 Job Groups) and indices for measuring community health (3 Job Groups). Two related activities, preparation of proposals and seeking funding were scored low by 5 and 4 Job Groups respectively. Using cost control data and cost analysis were scored low by 4 and 3 Job Groups respectively and understanding the use of computers by 4 Job Groups.

7.3 Other important activities

Six spaces were provided in the Alumni questionnaire for respondents to list other activities which were important in their jobs. Ninety respondents cited a total of 210 activities which are categorized in detail in Table 59. The distribution of activities cited for All Respondents, for four major Job Categories and Job Groups A-E plus H combined is shown in Table 60. Citations for Job Groups A-E plus H were combined because of the small number of citations given by respondents in any single Job Group. The largest number of citations by All Respondents fell under the heading of "organization and extramural relationships" followed closely by citations of "person to person relationships". For respondents in the Administrative/Managerial Job Category (and for Job Groups A-E plus H) there was greatest emphasis on "person to person" relationships.

8. RESULTS - FUTURE ACTIVITIES OF IMPORTANCE

Respondents were asked to cite any new activities which they felt might become important in the near future to persons in jobs like theirs. One hundred-forty nine respondents cited a total of 350 new activities which are listed in detailed categories in Table 61.

8.1 For All Respondents and by Job Category

The percent distribution of citations under major headings is shown in Table 62 for All Respondents and four major Job Categories. Two thirds of the new activities citations by Administrator/Managers fell under 4 major headings; "in response to official policy of legislation" (22.5%); "organization and extramural relationships" (15.3%); "health care delivery" (15.8%); and "management/administration" (12.4%).

8.2. By Job Groups

The distribution of citations within each of the 13 Job Groups is shown in Table 63. A summary of the distributions by Job Group is presented in Table 64. Categories containing 10.0-19.9% of the citations are designated by one asterisk (*), 20.0-29.9% by 2 asterisks (**) and $\geq 30.0\%$ by 3 asterisks (***). Note that for

some Job Groups, the distributions are based on very small numbers of citations. Considering Job Groups A-E plus H, new activities in "response to official policies or legislation" included at least 10% of the citations in each Job Group and thus appeared to be most generic among the new activities. Of interest is the high percentage of citations related to "environmental health" for Job Group C, the administrator/managers and consultants for community oriented control or preventive programs. By contrast the new activities perceived by Job Group H respondents, the environmental health administrator/managers, fell mainly under the headings of "response to official policies or legislation" and "organization and extramural relationships".

9. RESULTS - SPHTM LEARNING EXPERIENCES IN RELATION TO PRESENT JOB

9.1 Most valuable learning experiences

Tables 65-70 deal with the survey question "what specific learning experiences did you have while in the SPHTM which proved to be of particular value to you in meeting the demands of your (present) job?" Two hundred and one respondents gave a total 720 citations. Of these, 566 (78.6%) made reference to specific areas of the teaching curriculum and 154 referred to general experiences.

Specific citations are listed in Table 65. Approximately two thirds referred to traditional core areas (although not necessarily to SPHTM "core courses" within these areas). The largest number referred to learning experiences in the area of administration/management (153 citations). Included under this heading were all citations to PHA, HSA, MCA, HA and HMD. In addition to the large number of references to general (basic) administration courses, planning courses and field experience were prominent.

Citations in the areas of epidemiology (96) and biostatistics (80) were next most numerous. Some respondents perceived these courses as means to other ends such as problem solving and reading the literature. Citations in the area of environmental health were fewer in number and the majority referred to specific rather than general courses.

No other area of the curriculum received more than 30 citations. Mental health (29), public health nursing (21), education/communications (20) and tropical medicine (19) led the list. Within mental health, group process or group dynamics was cited most frequently. Within public health nursing, the emphasis was on field experience.

Some 20% of the total citations referred to general learning and maturation experiences (Table 66). Broadened understanding, the stimulus of interaction with other students, self-directed studies and practical or field experiences were most frequently cited.

9.1.1. For All Respondents and by Job Category

In Table 67, the distribution of citations under major headings is shown for All Respondents and four major Job Categories. Among Administrator/Managers half the citations referred to the admin/man areas, epidemiology or biostatistics. Citations to admin/man areas were proportionately fewer among Academician/Teachers. Among Practitioners, citations to environmental health were prominent.

9.1.2. By Job Group

Similar distributions by Job Group are shown in Table 68 and summarized in Table 69. Considering Job Groups A-E plus H, the administrative/management areas received a total 112 citations and at least 10% of total citations within each Job Group. These are shown in greater detail in Table 70. The largest number of citations was to public/public health administration courses. Courses associated with the School of Business were cited almost as frequently. In non-core areas (Table 68) the most frequent citations were to nutrition (7), family health/planning (7) and social-behavioral courses (5).

9.2. Experiences desired in retrospect

As a complement to "valuable learning experiences", respondents were asked to list learning experiences which, in retrospect, would have been of particular value in preparing them to meet the demands of their present jobs. The question was phrased to include both learning experiences which were and which were not available at the time they were students.

A total of 380 "desired" learning experiences were cited by a total of 173 respondents. Four of these were later excluded as inappropriate or providing insufficient information. The remaining 376 citations were divided into specific citations (273) which referred to some area of the curriculum and general citations (103). Approximately 35% of the specific citations were qualified in some way. For example, instead of stating "more health services administration", the respondent would state "more field experience in health services administration". These qualifying phrases were also coded in an effort to provide an additional dimension to the nature of the learning experiences which were desired.

The listing of specific citations (Table 71) again shows the largest number referring to the area of administration/management (123 citations). Under this heading, general citations of administration courses were most numerous but in contrast to "valuable learning experiences", courses in health services administration rather than public/public health administration led the list. In addition, there was a greater emphasis on various facets of medical care, modern management techniques and financial management.

The second largest number of citations (47) referred to environmental health, especially occupational and industrial health. Citations to biostatistics (24), particularly computers and programming, were next most frequent followed by education/communications (19), epidemiology (15) and mental health (15). In the latter area, as was true for "valuable learning experiences" the desire was for additional experience in group process/group dynamics.

The qualities desired for specific citations in the traditional core areas and for all specific areas are summarized in Table 72. In each of the core areas and overall, the most frequent qualification was "more applied, more practical and/or more field experience". An equally frequent qualification for citations in admin/man area was "more experience in planning and development".

General learning experiences, those which were not readily referable to specific areas of the curriculum, are detailed in Table 73. Of interest are the relatively large number of citations to political science/legislative process and the small number of citations to disease process and medical terminology. "Grant and contract proposals" received a surprising number of citations (14) in view of

the fact that the activity "preparing research of contract proposals" was rated as having lesser importance by most Job Groups (Table 56) and was not mentioned as a "new activity" (Table 61).

Specific and general desired learning experiences are distributed for All Respondents and 4 major Job Categories in Table 74. Experiences desired by Administrator/Managers were largely in the admin/man area while environmental health citations were frequent among Practitioners. Among the non-core areas, citations to mental health were notable for their consistency in each of the Job Categories.

9.3. Least useful learning experiences

"Least useful learning experiences" were elicited by the following question: "what learning experiences in the SPHTM in which you invested considerable time and effort have proved to be of little relevance and usefulness thus far in your career as a Health Professional." One hundred seventy-five respondents gave a total of 269 citations most of which (219 citations) were referrable to a specific area of the curriculum.

Again, citations to the administrative/managerial area were most frequent (Table 75) but in contrast to "valuable" and "desired" learning experiences, references to biostatistics were of a similar order of magnitude. To gain additional insight into the reasons why learning experiences had not been useful, qualifying phrases given for 78 of the 219 specific citations were coded (Table 76). The largest category, "unsatisfactory", included such comments as "not relevant to the real world" or "to job needs", "outdated", "not current". More extreme and directed criticisms were placed in the category of "specific instructional criticisms". These included comments of the genre "useless", "waste of time" and criticisms directed toward specific instructors. Half of the qualifying comments for biostatistics fell into a third category, "excessive depth and detail". The "other" category included "already had knowledge" (8) and "too superficial" (2).

Specific citations of least useful learning experiences are distributed for All Respondents and within 4 major Job Categories in Table 77. For both Administrator/Managers and Practitioners, the areas of admin/man and biostatistics each received approximately one third of the total citations. Academician/

Teachers by comparison focused primarily on the admin/man area and Consultants on environmental health.

10. RESULTS - SUGGESTIONS FOR IMPROVEMENT

Suggestions for improvement, offered by 171 respondents, were predominantly general rather than specific. The specific suggestions (Table 78) appear to reinforce the impressions gained from "desired learning experiences" and the qualifications for "least useful learning experiences". The source of the specific suggestions by Job Category is shown in Table 79.

General suggestions are listed in Table 80. The largest number of suggestions recommended "more real, more practical learning" and contained 13 suggestions for more instructors with real world experience. Another frequent suggestion was that the teaching/learning process be upgraded and particularly that the quality of instruction be improved. Greater flexibility and freedom of choice in selection of courses focused on fewer core courses and more electives.

By Job Category (Table 81), the recommendation for more real, practical learning experience was the most frequent suggestion for all but Consultants. This emphasis was particularly evident among Academician/Teachers and was consistent with the emphasis on practical experience seen in Table 67 (valuable learning experiences).

11. SUMMARY

In essence, the COC Alumni Survey sought to determine what graduates did in their jobs and how their SPHTM learning experiences related to their jobs. The underlying assumption was that if jobs could be related to SPHTM teaching Programs, the perceptions of recent graduates who were current job holders would be helpful in Program curriculum development. The focus of the survey was on jobs rather than SPHTM Programs because it was hypothesized at the outset that many graduates might be holding jobs which were only distantly related to their SPHTM Programs. The data supported this hypothesis. The general nature (Job Category) of the jobs held by graduates of various Programs can be seen in Table 24.

The responses to key questions have been analyzed both by the general Job Categories and the more specific Job Groups. From the descriptions of the types of jobs represented by each Job Group (Table 3), the faculty may identify those job areas which are the primary concern of its teaching Program. The tables on Major Functions and Activities will help to describe what persons do in these jobs. From these same tables, it is possible to identify Functions and Activities which are of generic importance to several different Job Categories or Groups. Identification of "generic" Functions and Activities may provide a basis for planning "core" courses which will serve the common purpose of several different teaching Programs. The tables dealing with SPHTM learning experiences will link School activities to Job Categories or Groups. Finally, suggestions for improvement have been tabulated both for specific instructional areas and for the School as a whole.

This summary of findings will focus on the aggregated responses of All Respondents. The summary and interpretation "job-specific" findings will most effectively be done by the faculties of the various teaching Programs.

The 270 respondents to the C.O.C. Alumni Survey represented 59% of the study population and 65% of the potential respondents i.e., those graduates believed to have received a questionnaire (Table 4). The distribution of respondents and non-respondents by highest degree at entry, year of graduation and degree received were similar. Females and graduates of certain programs were over represented among respondents and graduates with overseas mailing addresses were markedly under represented.

The survey period, 1969-1973 was apparently transitional in relation to the background of entering students (Table 16). The proportion of students entering without professional training or experience in health-related fields increased from 6% in 1969 to 25% in 1973.

Ninety-six percent of the respondents were currently employed in health related jobs (Table 20) but only 54% believed that their current jobs were directly related to their SPHTM programs (Table 28). Current jobs and SPHTM Programs were not closely related for several reasons, most of them attributable to circumstances external to the School (Table 29).

Nearly half of the respondents were employed in jobs which were primarily administrative/managerial in nature (Table 20) as judged from their official job titles. For All Respondents, administration/management emerged as the single most important job function with 83% of respondents performing the function and devoting a median of 20-29% of their time to it (Table 37). Consultation and supervision were the next most important functions for All Respondents but there was considerable variability among the 13 Job Groups (Tables 39 and 40).

Among the 44 activities to be scored for importance to their jobs, "using appropriately power, persuasion, influence and collaboration to help your program reach its goals" was scored high by the largest percentage (71%) of respondents (Table 46). "Using cost control data for the day to day management of your program" was scored low by the largest percentage (63%) of respondents (Table 47). As would be expected, there was considerable variability among Job Categories and Job Groups in the activities which were scored high and low. Within Job Groups, however, there was often a high degree of consensus with 80-100% of respondents scoring individual activities either high or low (Tables 53 and 54).

The increasing role of official agencies in health affairs was apparent in the citations of "new activities", i.e. activities which would become increasingly important in the near future. Also prominent were activities related to greater community involvement (Table 61 and 62).

Citations of specific learning experiences within the SPHTM were related, as would be expected to the various academic Programs pursued by the respondents. Citations to the present "core areas" were most frequent, probably because courses in the areas of epidemiology and biostatistics had been required for all students and courses in administration and environmental health required for most.

Overall, some 20% of experiences cited as having particular value in jobs were in the administration/management areas followed by 13% in epidemiology and 11% in biostatistics (Table 65 and 67). A considerable number of valuable learning experiences were of a general nature. The stimulus of personal interaction and practical experiences were frequently cited (Table 68).

Among SPHTM experiences least useful thus far (Tables 75 and 77), the administration/management area led the list with 26% of citations followed by biostatistics (20%).

Among learning experiences desired in retrospect, 32% of the citations were to the administrative/managerial area (Tables 71 and 74) with emphasis on more practical experience and experience in planning and development.

Most of the suggestions for improvement were of a general nature. Twenty five percent related to providing more real, practical learning and 17% recommended upgrading of the learning experience particularly the quality of instruction (Tables 80 and 81). Among the specific suggestions for improvement (Table 78), it is gratifying to note that many have been or are being implemented.

As in any survey of this type, the respondents are essentially volunteers and undoubtedly differ from non-respondents in ways which were not measurable. Furthermore, the survey encompassed a transitional period during which an increasing proportion of students entered without professional background. The respondents as a whole therefore may represent persons with more professional background than those students entering since 1973. Their jobs however, might be those which more recent graduates would expect to enter as they acquired professional experience.

A serious limitation in interpretation results for various Job Groups is the small number of respondents in each Job Group. None the less, the data represent a beginning not available from other sources. Also, they represent the perceptions of SPHTM graduates and in that sense are unique for the School.

Certain questions remain to be answered. The purpose of feedback into any system is to provide a basis for internal adjustment. Thus the usefulness of the survey results in their present form remains to be seen. Assessment of how the results are utilized may suggest changes in the design of the survey instrument so that the most useful information can be obtained in a more efficient manner.

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FIG. 1. "Core" Credit Hours as a Proportion of Total Credit Hours Required for the MPH Degree, SPHTM
1950-51 - 1975-76

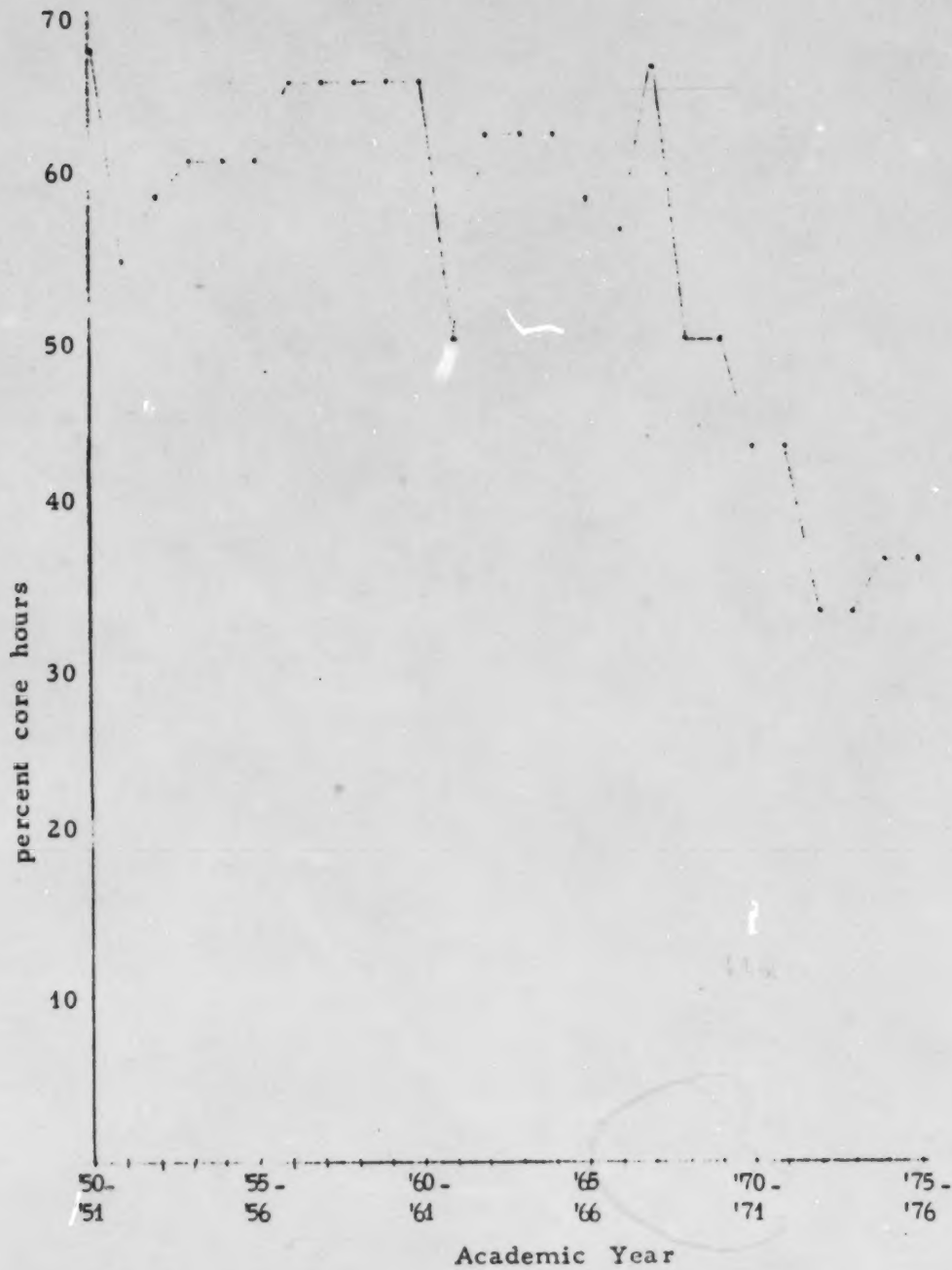


FIG. 2. New Activities - Cumulative Percent of Citations
vs. Cumulative Percent of Respondents

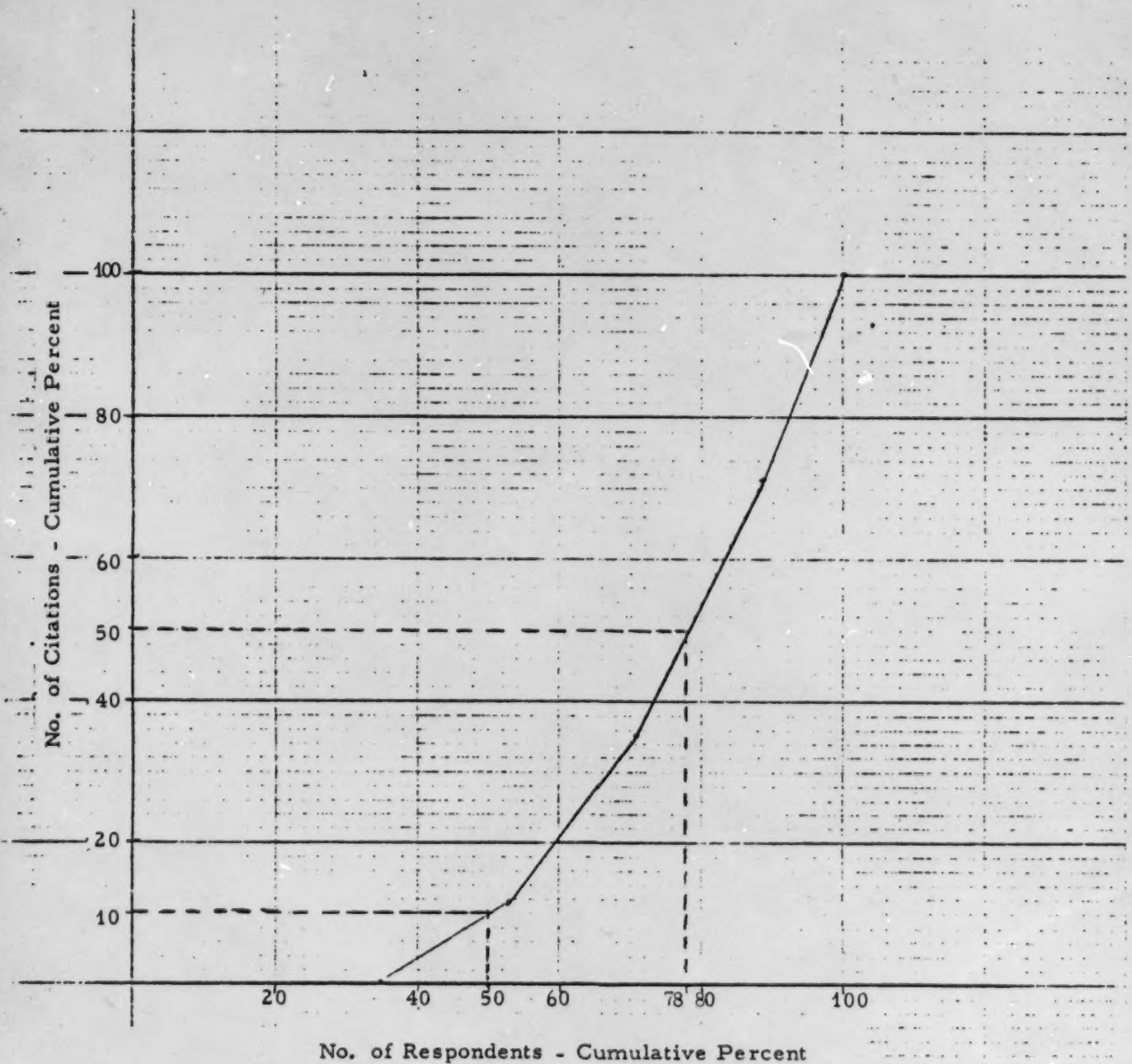


TABLE 1. Organization of the SPHTM for Academic Years
1968 - 69 through 1971 - 72*

<u>1968 - 69</u>	<u>1969 - 70</u>	<u>1970 - 71</u>	<u>1971 - 72</u> and <u>1972 - 73</u>
Biostatistics	Biostatistics	Biostatistics	Applied Hlth. Sci.
Environmental Health	Environmental Health	Environmental Health	Fam. Health
Epidemiology	Epidemiology	Epidemiology	Pop. Studies
Health Services Admin.	Health Services Admin.	Fam. Hlth. -Pop. Dynamics	Public Hlth. Nurs.
Med. Care-Hosp. Admin.	Med. Care-Hosp. Admin.	Health Services Admin.	Mental Health
Chronic Dis. -Gerontology	Chronic Dis. -Gerontology	Med. Care-Hosp. Admin.	Nutrition
Maternal Ch. Hlth. -Pop. Stud.	Maternal Child Health	Microbiology	Hlth. Manpower
Maternal Ch. Health	Microbiology	Nutrition	Com. -Hlth. Ed.
Pop. -Fam. Stud. (Center)	Nutrition-Biochemistry	Parasitology	Environmental Hlth.
Microbiology	Parasitology	Public Hlth. Administration	Epidemiology-Biostat.
Nutrition-Biochemistry	Pop. -Fam. Stud. (Center)	Public Health Admin.	Epidemiology
Parasitology	Public Hlth. Administration	Public Health Nursing	Biostatistics
Public Hlth. Administration	Public Hlth. Admin.	Mental Health	Health Serv. Admin.
Public Hlth. Admin.	Public Hlth. Nursing	Health Education	Pub. Hlth. Admin.
Public Hlth. Nursing	Mental Health	Tropical Med. -Internat. Hlth.	Med. Care Admin.
Mental Health	Health Education	International Health	Hosp. Admin.
Health Education	Tropical Med. -Internat. Hlth.	Tropical Medicine	Microbiology
Tropical Med. -Internat. Hlth.	International Health		Trop. Med. -Para.
International Health	Tropical Medicine		Internat. Hlth.
Tropical Medicine			Parasitology
			Trop. Medicine

*Source: SPHTM Bulletins 1968 - 69, 1969 - 70, 1970 - 71, 1971 - 72, 1972 - 73

TABLE 2. Number of Graduates by Program, SPHTM,
May, 1969-August, 1973¹

<u>Program</u>	<u>Number of Graduates</u>
Biostatistics	3
Chronic Disease-Gerontology	1
Environmental Health	51
Epidemiology	64
Family Health	7
Family Health-Population Studies	30
Health Manpower Development	1
Health Services Administration	10
Hospital Administration	28
International Health	18
Maternal Child Health	6
Medical Care Administration	30
Mental Health	11
Microbiology	11
Nutrition	20
Parasitology	6
Population Studies	5
Public Health Administration	61
Public Health Nursing	55
Tropical Medicine	28
<u>Unclassified</u>	<u>11</u>
Total	457

¹ Source: annual listing of graduates by degree and program in the SPHTM Bulletins 1970-71, 71-72, 72-73, 73-74 and Office of Admissions

TABLE 3. Listing of Job Groups

Job Group	Description
A -	Administrator/managers of patient facilities having no explicit community orientation. n= 22 (20) ¹ Examples: administrative services officer for ambulatory care center; hospital administrator
B -	Administrator/managers of patient services without explicit community orientation. n= 14 (13) Examples: director of nursing (hospital); director of emergency room (hospital)
C -	Administrator/managers and consultants for community oriented control or preventive programs. n= 38 (35) Examples: chief, health and environmental activities (military); health officer (county)
D -	Administrator/managers of patient services with explicit community orientation. n= 26 (24) Examples: clinical co-ordinator (community clinic); nursing supervisor for TB control (state)
E -	Planners for health services and health manpower. n= 17 (16) Examples: assistant director of health planning for area planning commission (state); planning associate for area planning council
F -	Practitioners of patient care without explicit community orientation. n= 22 (16) Examples: physician in regional hospital (military); pediatrics resident (hospital)
G -	Practitioners of patient care with explicit community orientation. n= 13 (12) Examples: resident in aerospace medicine (military); public health nurse (county); public health nutritionist (state)
H -	Environmental health administrator/managers and consultants. n=18(16) Examples: manager of environmental engineering (consulting engineers); public health administration in division of environmental health (county)

TABLE 3. (cont.) - Listing of Job Groups

Job Group	Description
I -	Environmental health practitioners. n=13 (13) Examples: environmental specialist (engineering company); environmental technologist for the institutional sanitation unit (state)
J -	Scientists and researchers. n= 23 (18) Examples: chief, epidemiology section (military); deputy chief, epidemiology division; public health microbiologist (county)
K -	Teachers of patient care without explicit community orientation. n= 20 (16) Examples: instructor, department of pediatrics (medical school); instructor, maternal and newborn nursing (college of nursing)
L -	Teachers of patient care and services with explicit community orientation. n=20 (18) Examples: assistant professor, department of preventive and social medicine (medical school); assistant professor of public health nursing (department of nursing in university)
M -	Teachers of sciences. n= 12 (10) Examples: head, department of microbiology (university); lecturer, medical parasitology (medical school); assistant professor, epidemiology (school of public health)

¹ number of respondents in Job Group who completed more than
2 pages of the questionnaire

TABLE 4. Disposition of 457 SPHTM Graduates

Receiving Degrees, May, 1969-August, 1973

457	graduates	
-20	received pre-test questionnaire (4.4%)	
-20	address unknown (4.4%)	
417	potential respondents	
147	non-respondents	(35.3%)
270	respondents	(64.7%)
41	completed 2 pages only	(15.2%)
229	completed > 2 pages	(84.8%)

TABLE 5. Measures of Response to Open-Ended Questions Among 229 Respondents

Question	Total no. of citations	No. respondents giving ≥ 1 citation	% respondents giving ≥ 1 citation	% respondents giving 50% of total citations	Mean no. citations per resp. giving ≥ 1 citation
New Activities	350	149	65.1 ¹	78 ²	2.35
Valuable experiences	720	201	87.8	78	3.58
Desired experiences	380 ³	173	75.5	78	2.20
Least useful experiences	269	175	76.4	72	1.54
Suggestions	385	171	74.7	78	2.25

¹ percent of 229 respondents

² determined from an ogive prepared for each question

³ includes 4 citations later excluded as inappropriate or insufficient information

TABLE 6. Distribution of Graduates, Respondents and Non-respondents by Year of Graduation

Population	Total	Year of Graduation				
		'69	'70	'71	'72	'73
All graduates	457 (99.9)	81 (17.7)	76 (16.6)	89 (19.5)	108 (23.6)	103 (22.5)
Potential respondents	417 (100.0)	73 (17.5)	68 (16.3)	79 (18.9)	97 (23.3)	100 (24.0)
Respondents	270 (100.0)	50 (18.5)	46 (17.0)	48 (17.8)	65 (24.0)	61 (22.6)
Non-respondents	147 (100.0)	23 (15.6)	22 (15.0)	31 (21.1)	32 (21.8)	39 (26.5)

The differences in the distributions of respondents and non-respondents are not significant. $\chi^2=2.08$, $df=4$, $p=.172$

TABLE 7. Distribution of Graduates, Respondents and Non-Respondents by Highest Degree at Entry to SPHTM

Population	Total	Degree		
		Bach.	Masters	Doctorate
All graduates	457 ¹ (100.0)	239 ¹ (52.3)	56 (12.3)	162 (35.4)
Potential respondents	417 (99.9)	217 (52.0)	51 (12.2)	149 (35.7)
Respondents	270 (100.0)	142 (52.6)	37 (13.7)	91 (33.7)
Non-respondents	147 (100.0)	75 (51.0)	14 (9.5)	58 (39.5)

¹ includes 2 combined degree (MPH-MD) students with no Bachelor's degree

The differences in the distributions of respondents and non-respondents are not significant. $\chi^2=2.29$, $df=2$, $p=.32$

TABLE 8. Distribution of Graduates, Respondents and Non-respondents
by Highest SPHTM Degree Conferred, May, 1969-August, 1973

Population	Total	SPHTM Degree Conferred				
		MPH	MPH-TM	MS Hyg.	Dr. P.H.	Dr. Sc. Hyg.
All graduates	457 (100.1)	270 (59.1)	52 (11.4)	99 (21.7)	24 (5.3)	12 (2.6)
Potential respondents	417 (99.9)	243 (58.3)	49 (11.7)	91 (21.8)	24 (5.7)	10 (2.4)
Respondents	270 (100.0)	152 (56.3)	29 (10.7)	61 (22.6)	21 (7.8)	7 (2.6)
Non-respondents	147 (99.9)	91 (61.9)	20 (13.6)	30 (20.4)	3 (2.0)	3 (2.0)

The differences in the distributions of respondents and non-respondents are not significant. $\chi^2=6.95$, df =4, p=.14

TABLE 9. Distribution of Graduates, Respondents and Non-respondents
by Most Current Available Mailing Address

Population	Total	Location		
		Louisiana	Continental U.S. not Louisiana	Overseas
All graduates	457 (100.0)	118 (25.8)	229 (50.0)	110 (24.1)
Potential respondents	417 (100.0)	109 (26.1)	206 (49.4)	102 (24.5)
Respondents	270 (100.0)	74 (27.4)	144 (53.3)	52 (19.3)
Non-respondents	147 (100.0)	35 (23.8)	62 (42.2)	50 (34.0)

The differences in the distributions of respondents and non-respondents are significant. $\chi^2=11.34$, $df=2$, $p=.003$

TABLE 10. Distribution of Graduates, Respondents and Non-respondents by Sex

Population	Total	Sex	
		Male	Female
All graduates	457 (100.0)	329 (72.0)	128 (28.0)
Potential respondents	417 (100.0)	303 (72.7)	114 (27.3)
Respondents	270 (100.0)	187 (69.3)	83 (30.7)
Non-respondents	147 (100.0)	116 (78.9)	31 (21.1)

The differences in the distributions of respondents and non-respondents are significant. $\chi^2=4.46$, $df = 1$, $p = .035$

TABLE 11. Distribution of Graduates, Respondents and Non-respondents by SPHTM Program or Program Grouping

Program	All Graduates		Potential Respondents		Respondents		Non-Respondents	
	No.	%	No.	%	No.	%	No.	%
Epidemiology+Biostatistics	67	14.7	60	14.4	35	13.0	25	17.0
Environmental Health	51	11.2	50	12.0	27	10.0	23	15.6
Fam.Hlth. -Pop.St. + Fam.Hlth. +Pop.St. + Mat. Child Health	48	10.5	44	10.5	25	9.3	19	12.9
Hosp. Admin. +Hlth. Ser. Admin. +Hlth. Man.Devel.	39	8.5	36	8.6	22	8.1	14	9.5
International Health	18	3.9	17	4.1	13	4.8	4	2.7
Med. Care Admin. + Chr.Dis.	31	6.8	26	6.2	16	5.9	10	6.8
Mental Health	11	2.4	11	2.6	11	4.1	0	0.0
Nutrition	20	4.4	17	4.1	10	3.7	7	4.8
Public Health Administration	61	13.3	55	13.2	39	14.4	16	10.9
Public Health Nursing	55	12.0	47	11.3	39	14.4	8	5.4
Tropical Med. +Parasitology	34	7.4	32	7.7	18	6.7	14	9.5
Microbiology+Unclassified	22	4.8	22	5.3	15	5.5	7	4.8
Total	457	99.9	417	(100.0)	270	99.9	147	99.9

The differences in the distributions of respondents and non-respondents are significant.
 $\chi^2=21.31$, $df=11$, $p=.030$

TABLE 12. Distribution of Graduates by Sex and
Year of Graduation

Year of Graduation	Male	Female	Total
1969	57 (70.4)	24 (29.6)	81 (100.0)
1970	49 (64.5)	27 (35.5)	76 (100.0)
1971	65 (73.0)	24 (27.0)	89 (100.0)
1972	83 (76.9)	25 (23.1)	108 (100.0)
1973	75 (72.8)	28 (27.2)	103
Total	329 (72.0)	128 (28.0)	457 (100.0)

TABLE 13. Distribution of Graduates by Highest Degree at Entry and Year of Graduation

Year of Graduation	Highest Degree at Entry			Total
	Bachelors ¹	Masters	Doctorate	
1969	35 (43.2)	8 (9.9)	38 (46.9)	81 (100.0)
1970	38 (50.0)	7 (9.2)	31 (40.8)	76 (100.0)
1971	42 (47.2)	12 (13.5)	35 (39.3)	89 (100.0)
1972	66 (61.1)	14 (13.0)	28 (25.9)	108 (100.0)
1973	58 (56.3)	15 (14.6)	30 (29.1)	103 (100.0)
Total	239 (52.3)	56 (12.3)	162 (35.4)	457 (100.0)

¹ includes 2 combined degree (MPH-MD) students with no Bachelor's degree

TABLE 14. Mean Age at SPHTM Graduation by Year of Graduation for 263 Respondents¹

Year of Graduation	No.	Mean Age (yrs)	S.E.
1969	49	35.63	1.0444
1970	44	34.59	1.0760
1971	46	36.26	1.3643
1972	65	31.77	0.8604
1973	59	33.15	0.9648

¹ omits 7 with no data

TABLE 15. Basic Professional Discipline at Entry by Year of Graduation for 270 Respondents

Discipline	Year					Total
	'69	'70	'71	'72	'73	
<u>Health related</u>	45	37	37	45	42	206
	(90.0)	(80.4)	(77.1)	(69.2)	(68.9)	(76.3)
physician	17	16	15	12	19	79
veterinarian	3	1	3	4	1	12
nurse	11	11	8	11	11	52
sanitarian	6	4	7	6	4	27
health admin.	5	3	3	7	5	23
other (dietician, pharmacist, social worker)	3	2	1	5	2	13
<u>Scientist</u> (biomed., biolog., physical, behavior, tech.)	4	3	3	3	4	17
	(8.0)	(6.5)	(6.3)	(4.6)	(6.5)	(6.3)
<u>Non-health</u>	1	6	8	17	15	47
student, none, other (educator, minister, etc.)	(2.0)	(13.0)	(16.7)	(26.1)	(24.6)	(17.4)
	50	46	48	65	61	270
	(100.0)	(99.9)	(100.1)	(99.9)	(100.0)	(100.0)

TABLE 16. Professional Status (Health Related) Prior to Entry by
Year of Graduation for 270 Respondents

Year of Graduation	Professional Status				Total
	Nil ¹	Licensure or Experience ²	Nurse or Master's Hlth. Related	Doctorate Hlth. Related	
1969	3 (6.0)	12 (24.0)	15 (30.0)	20 (40.0)	50 (100.0)
1970	5 (10.9)	10 (21.7)	14 (30.4)	17 (36.9)	46 (99.9)
1971	10 (20.8)	7 (14.6)	12 (25.0)	19 (39.6)	48 (100.0)
1972	19 (29.2)	13 (20.0)	16 (24.6)	17 (26.1)	65 (99.9)
1973	15 (24.6)	11 (18.0)	15 (24.6)	20 (32.8)	61 (100.0)
Total	52 (19.3)	53 (19.6)	72 (26.7)	93 (34.4)	270 (100.0)

¹ includes baccalaureate degree not leading to licensure and higher degrees which are non-health related

² includes baccalaureate degrees with licensure or certification (eg. med. tech., occupational therapy) or baccalaureate plus sufficient work experience to claim a basic discipline

TABLE 17. Present Geographic Location
of 270 Respondents

Location	No.	Percent of Total
US	210	77.8
Louisiana	67	24.8
8 surrounding states ¹	60	22.2
other continent U.S.	78	28.9
non-continent U.S.	5	1.9
Canada	1	0.4
Central American (inc. Carribean)	5	1.9
South America	3	1.1
Europe	6	2.2
Asia	35	13.0
near East	3	
middle East	2	
south East	29	
far East	1	
Africa	10	3.7
north	8	
south	2	
Total	270	100.1

¹ Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina and Texas.

TABLE 13. Present Area of Occupational
Specialization for 270 Respondents

Present Occupation	No.	%
<u>None</u> ¹	<u>2</u>	3.3
<u>Administration</u>	61	22.6
Hospital	9	
Outpatient care	31	
Preventive or control programs	4	
Public/community health	17	
<u>Personal services with community or public health orientation</u>	<u>50</u>	18.5
Medical (preventive, occupational)	23	
Nursing	18	
Veterinary	2	
Mental health	1	
Nutrition, dietetics	3	
Social services	1	
<u>Personal services-not community or public health oriented</u>	<u>42</u>	15.9
Medical	18	
Nursing	16	
Veterinary	3	
Mental health	2	
Nutrition, dietetics	3	
Social service	1	
<u>Environmental health</u>	<u>16</u>	13.3
General (inc. env. engineering)	20	
Sanitary	5	
Occupational	8	
Water, radiation	3	
<u>Health manpower/services planning</u>	<u>23</u>	8.5
<u>Epidemiology</u>	<u>20</u>	7.4
<u>Laboratory sciences</u> (inc. microbiology, parasitology)	<u>2</u>	3.3
<u>Educational administration</u>	<u>5</u>	1.9
<u>Research</u>	<u>1</u>	1.1
<u>Family planning</u>	<u>3</u>	1.1
<u>Other</u>	<u>8</u>	3.0
Total	270	99.9

¹ student, retired, not employed

TABLE 19. Organization for Present Jobs Held
by Respondents

Organization	No.	%
Military	<u>31</u>	11.9
International	<u>3</u>	1.1
Official	<u>102</u>	39.1
city	6	
county	14	
state	35	
regional	2	
federal	45	
Quasi-official ¹	<u>9</u>	3.4
Private	<u>44</u>	16.9
Health service providing	26	
Industrial	5	
Planning, consult, research	5	
Engineering	4	
Voluntary	3	
Insurance	1	
University or 4 year college	<u>65</u>	24.9
Health professional school	51	
Health related program	9	
Other	5	
Educational other than university or 4 Year College	<u>5</u>	1.9
Self-employed	<u>2</u>	0.8
Total	261 ²	100.0

¹ e. g. area health planning councils, regional medical programs

² omits 2 no data and 7 not employed

TABLE 20. Job Category¹ of "Present Job" for
270 Respondents

Job Category	No.	%
Non-health related job	3	1.1
Administrative/managerial	129	47.8
Research	5	1.9
Academic/teaching	46	17.0
Consultant/advisor	17	6.3
Practitioner ²	61	22.6
Not employed	7	2.6
No data	2	0.7
Total	270	100.0

¹ Classification based on Complete Official Job Title and Organization

² Jobs which are not primarily admin./man., research, teaching or consultant but simply the practice of other activities for which the respondent was equipped e.g. the practice of medicine, social work, p.h. nursing, etc.

TABLE 21. Job Types for 129 Respondents Categorized
as Administrator/Managers

Job Type	No.	%
<u>Programs, agencies</u>	<u>49</u>	<u>38.0</u>
General preventive/control programs	22	
Public/community health	9	
Family planning	3	
Health services/manpower planning	8	
Voluntary	4	
Other (regulatory, registry, health education)	3	
<u>Facilities</u>	<u>22</u>	<u>17.1</u>
Hospital	8	
Outpatient facilities	12	
Extended care facilities	2	
<u>Patient care-p.h. orientation</u>	<u>17</u>	<u>13.2</u>
Preventive, occupational medicine	5	
P.h. /community nursing	7	
P.h. veterinarian	2	
Nutrition	1	
Physical therapy	1	
Social services	1	
<u>Patient care-non-p.h. orientation</u>	<u>13</u>	<u>10.1</u>
Medical services	6	
Nursing services	5	
Veterinary services	2	
<u>Environmental health</u>	<u>12</u>	<u>9.3</u>
General, env. engineering	5	
Sanitarian	3	
Occupational, industrial	1	
Water	1	
Other (pest control)	2	
<u>Scientist</u>	<u>11</u>	<u>8.5</u>
Laboratory	3	
Epidemiology	6	
Research program	2	
<u>Education</u>	<u>5</u>	<u>3.9</u>
Health professions	4	
Other	1	
Total	129	100.1

Job Type	No.	%
<u>Patient care-non-p.h. orientation</u>	<u>16</u>	34.8
Medical	3	
Nursing	11	
Nutrition	2	
 <u>Patient care-p.h. orientation</u>	 <u>14</u>	 30.4
Prevention, occupational medicine	2	
Public health/community nursing	8	
Mental health	2	
 <u>Sciences</u>	 <u>10</u>	 21.7
Laboratory	6	
Epidemiology	2	
Behavioral	2	
 <u>Administration/planning</u>	 <u>4</u>	 8.7
Medical care	1	
Health services/manpower planning	2	
Medical records	1	
 <u>Environmental health</u>	 <u>2</u>	 4.3
 Total	 46	 99.9

TABLE 23. Job Types for 61 Respondents Categorized
as Practitioners in Their Present Jobs

Job Type	No.	%
<u>Patient care-non-p.h. orientation</u>	<u>22</u>	<u>36.1</u>
Medical	19	
Nursing	1	
Nutrition	1	
Social services	1	
 <u>Environmental health</u>	 <u>13</u>	 <u>21.3</u>
General, env. engineering	5	
Sanitary	3	
Occupational/industrial	3	
Water	1	
Radiation	1	
 <u>Patient care-p.h. orientation</u>	 <u>12</u>	 <u>19.7</u>
Preventive, occupational medicine	5	
Public health, comm. nursing	4	
Nutrition	3	
 <u>Planning</u>	 <u>8</u>	 <u>13.1</u>
Health services/manpower	7	
Facilities	1	
 <u>Sciences</u>	 <u>5</u>	 <u>8.2</u>
Laboratory	2	
Epidemiology	2	
Research	1	
 <u>Health education</u>	 <u>1</u>	 <u>1.6</u>
 Total	 61	 100.0

TABLE 24. Job Category by SPHTM Program for 270 Respondents

Program	No.	Job Category						No data
		Non- ¹ health	Admin.-man.	Research	Acad.-teaching	Consul-tant	Practi-tioner	
Epid. + Bios.	35	1	19	3	4	2	6	0
Environ. Hlth.	27	2	8	0	2	4	11	0
Fam. Hlth.-Pop. St.+ Fam. Hlth.+ Pop. St.+M.C.H.	25	1	11	0	9	1	3	0
Hosp. Admin.+ H.S.A.+H. M. D.	22	0	15	0	0	1	5	1
International Hlth.	13	0	9	0	1	2	1	0
Med. Care Admin.+Chr. Dis.	16	2	10	0	1	0	3	0
Mental Hlth.	11	0	1	1	6	0	3	0
Nutrition	10	0	2	1	2	0	5	0
Pub. Hlth. Admin.	39	1	21	0	1	3	13	0
Pub. Hlth. Nursing	39	3	16	0	13	3	4	0
Trop. Med. + Parasit.	18	0	10	0	4	1	2	1
Micro. + Unclas.	15	0	7	0	3	0	5	0
Total	270	10	129	5	46	17	61	2

¹ Includes students and not employed as well as non-health related jobs

6/10/75

TABLE 25. Job Category¹ for Jobs Held by Respondents Prior to Entry in SPIITM,
Just After Graduation from SPHTM and Present

Job	Non-health related job	Job Category-Health Related Jobs						Total	Not Employed	No Data	TOTAL
		Administra- tive/mtg.	Research	Academic/ Teaching	Consultant Advisor	Practitioner ²	Unclassi- fied				
Prior	6	81	2	29	13	104	1	236	28	6	270
	(2.5)	(34.3)	(0.8)	(12.3)	(5.5)	(44.1)	(0.4)	(97.9)			
Just after	6	106	6	44	19	79	0	260	9	1	270
	(2.3)	(40.8)	(2.3)	(16.9)	(7.3)	(30.4)	(0.0)	(100.0)			
Present	3	129	5	46	17	61	0	261	7	2	270
	(1.1)	(49.4)	(1.9)	(17.6)	(6.5)	(23.4)	(0.0)	(97.9)			

¹ Classification based on Complete Official Job Title and Organization

² Jobs which are not primarily admin./man., research, teaching or consultant but simply the practice of other activities for which the respondent was equipped e.g. the practice of medicine, social work, p.h. nursing, etc.

TABLE 26. Present Job Category by Job Category Prior to Entrance into the SPHTM for 263 Respondents¹

Job Prior to Entry		Present Job Category					
		Non-health	Admin. man.	Research	Academ/teach.	Consultant	Practitioner
Category	No.						
Non-health	33	2	8	1	2	1	19
Admin/man.	81	3	60	0	11	3	4
Research	2	0	0	1	0	0	1
Academ. / teach.	29	2	5	0	20	0	2
Consultant	13	0	6	0	0	6	1
Practitioner	104	3	45	3	12	7	34
Unclassified	1	0	1	0	0	0	0
Total	263	10	125	5	45	17	61

¹ omits 7 respondents whose job category (prior and/or present) is unknown

TABLE 27. Transitional Probabilities from Prior to Present Job Categories

Prior Job	No.	Present Job				Total
		Non-health	Admin. / man.	Acad. / teach.	Practitioner	
Non-health	31	.065	.258	.065	.613	1.001
Admin. /man.	78	.038	.769	.141	.051	.999
Acad. /teach	29	.069	.172	.690	.069	1.000
Practitioner	94	.032	.479	.128	.362	1.001

TABLE 28. SPHTM Program as Preparation
for Present Job by Program

Program	No.	Prog. ¹ as Prep. for Job		
		yes	no	not exactly
Epid. + Bios.	24 ²	12	5	7
E.H.	24	13	4	7
F.H. - P.S. + F.H. + P.S. + M.C.H.	19 ²	10	4	5
H.A. + H.S.A. + H.M.D.	20	14	2	4
I.H.	10 ³	5		5
M.C.A. + Ch.D.	13	8	2	5
Mental Health	10	3	3	4
Nutrition	8	3		5
P.H.A.	35 ²	20	1	14
P.H.N.	31 ²	17	3	11
T.M. + Para.	15	6		9
Micro. + Unc.	14	10	2	2
Total	223 (100.0)	121 (54.3)	26 (11.7)	76 (34.0)

¹ Question "Would you say that your SPHTM Program was intended as preparation for your (present) job?"

² omits 1 no data

³ omits 2 no data

TABLE 29. Reasons for "No" or "Not Exactly" (Table 25)

Reason	No. of citations	%
<u>Deficiency in SPHTM Program</u>	<u>22</u>	<u>21.8</u>
too theoretical, traditional; not sufficiently practical, current needed different orientation eg. less technical, more management	5	
insufficiently advanced, specialized	4	
assigned to inappropriate program	8	
other	2	
	3	
<u>Job and Program don't quite match</u>	<u>28</u>	<u>27.7</u>
job has somewhat different demands (eg. more admin. responsibilities)	14	
teaching rather than practicing	6	
job doesn't permit use of SPHTM training	5	
context not transferable (eg. civilian vs. military, U.S. vs. foreign)	3	
<u>Obtained degree for enrichment, status, advancement or future work</u>	<u>22</u>	<u>21.8</u>
<u>Unanticipated job change or no program-related job available</u>	<u>28</u>	<u>27.7</u>
<u>Other</u> (respondent had no clear career goals)	<u>1</u>	<u>1.0</u>
Total	101 ¹	100.0

¹Omits 1 no data

TABLE 30. Distribution of Reasons for
"No" and "Not Exactly"

SPHTM Program as prep. for job	No.	Reason				
		Program deficiency	Job-Prog. don't match	Enrichment status future	Unanticipated change	Other
No	26 (99.9)	3 (11.5)	5 (19.2)	5 (19.2)	13 (50.0)	
Not exactly	75 ¹ (100.0)	19 (25.3)	23 (30.7)	17 (22.7)	15 (20.0)	1 (1.3)
Total	101 ¹ (100.0)	22 (21.8)	28 (27.7)	22 (21.8)	28 (27.7)	1 (1.0)

¹ omits 1 no data

TABLE 31. SPHTM Program as Preparation for
Present Job by Year of Graduation

Year of graduation	No.	SPHTM Program as prep. for job			Reason for "no" or "not exactly"				
		yes	no	not exactly	Program deficiency	Job-Prog. don't match	Enrichment status, future	Unanticipated change	Other
1969	38 (100.0)	22 (57.9)	3 (7.9)	13 (34.2)	7 (43.7) ¹	1 (6.3)	3 (18.7)	5 (31.3)	
1970	38 (100.0)	18 (47.4)	5 (13.2)	15 (39.5)	6 (30.0)	6 (30.0)	2 (10.0)	6 (30.0)	
1971	40 (100.0)	23 (57.5)	4 (10.0)	13 (32.5)	4 (23.5)	3 (17.6)	2 (11.8)	7 (41.2)	1 (5.9)
1972	58 (100.0)	32 (55.2)	10 (17.2)	16 (27.6)	4 (15.4)	9 (34.6)	8 (30.8)	5 (19.2)	
1973	49 (100.0)	26 (53.1)	4 (8.2)	19 ² (38.8)	1 (4.5)	9 (40.9)	7 (31.8)	5 (22.7)	
Total	223 ³ (100.0)	121 (54.3)	26 (11.7)	76 ² (34.1)	22 (21.8)	28 (27.7)	22 (21.8)	28 (27.7)	1 (1.0)

¹ percent of respondents answering "no" or "not exactly"² includes 1 no data for "reason"³ omits 6 no data

TABLE 32. SPHTM Program as Preparation for Present
Job by Present Location (U.S. vs non-U.S.)

Location	No.	Prog. ¹ as Prep. for Job			Percent Respondents Rating ² Prog. '4' or '5'	
		yes	no	not exactly	all resp.	'yes' resp.
U.S.	176 ³ (100.0)	92 (52.3)	23 (13.1)	61 (34.6)	60.8	78.5
Non U.S.	47 ⁴ (100.0)	29 (61.7)	3 (6.4)	15 (31.9)	74.5	89.7
Total	223 (100.0)	121 (54.3)	2.6 (11.7)	76 (34.0)	63.7	81.8

¹ Question "Would you say that your SPHTM Program was intended as preparation for your (present) job?"

² Question "How would you rate your SPHTM Program in preparing you to meet the demands of your job?"
My Program provided

1
little
knowledge
of value

2

3
some
useful
knowledge

4

5
much
essential
knowledge

³ omits 5 no data

⁴ omits 1 no data

TABLE 33. SPHTM Program as Preparation for
Present Job by Job Category

Job Category	No.	Pro ¹ as Prep. for Job			Percent Respondents Rating ² Prog. '4' or '5'	
		yes	no	not exactly	all resp.	'yes' resp.
Admin/man	117 ³ (100.0)	69 (59.0)	11 (9.4)	37 (31.6)	65.8	82.6
Acad/teach	36 ³ (100.0)	18 (50.0)	5 (13.9)	13 (36.1)	69.4	83.3
Consultant	15 (100.1)	10 (66.7)	1 (6.7)	4 (26.7)	73.3	90.0
Practitioner	50 ³ (100.0)	22 (44.0)	8 (16.0)	20 (40.0)	50.0	72.7

¹ Question "Would you say that your SPHTM Program was intended as preparation for your (present) job?"

² Question "How would you rate your SPHTM Program in preparing you to meet the demands of your job?"

1	2	3	4	5
little		some		much
knowledge		useful		essential
of value		knowledge		knowledge

³ omits 2 no data

Note: non-health and research categories are omitted-too few respondents

TABLE 34. Importance of SPHTM Degree(s) in Attaining
Present Job by Job Category

Job Category	No.	Importance			
		Prerequisite	Important qualification	Helpful qualification	Not important
Admin. / man.	129 (100.0)	21 (16.3)	55 (42.6)	39 (30.2)	14 (10.9)
Acad. / teach	46 (100.0)	15 (32.6)	13 (28.3)	15 (32.6)	3 (6.5)
Consultant	17 (100.1)	7 (41.2)	6 (35.3)	2 (11.8)	2 (11.8)
Practitioner	58 ¹ (100.0)	8 (13.8)	24 (41.4)	13 (22.4)	13 (22.4)
Research	5	1	1	3	
All ²	255 (99.9)	52 (20.4)	99 (38.8)	72 (28.2)	32 (12.5)

¹ excludes 3 no data

² excludes 2 no data and 10 respondents in non-health related jobs or not employed

TABLE 35. Importance of SPHTM Degree(s) in Attaining
Present Job by Job Group

Job Group	No.	Importance			
		Prerequisite	Important qualification	Helpful qualification	Not important
A	22 (100.0)	9 (40.9)	5 (22.7)	6 (27.3)	2 (9.1)
B	14 (100.0)	1 (7.1)	6 (42.6)	6 (42.9)	1 (7.1)
C	38 (99.9)	5 (13.1)	20 (52.6)	13 (34.2)	
D	26 (100.1)	4 (15.4)	10 (38.5)	6 (23.1)	6 (23.1)
E	17 (100.1)	2 (11.8)	12 (70.6)	2 (11.8)	1 (5.9)
F	20 ¹ (100.0)	2 (10.0)	3 (15.0)	4 (20.0)	11 (55.0)
G	12 ² (100.0)	3 (25.0)	3 (25.0)	4 (33.3)	2 (16.7)
H	18 (100.0)	3 (16.7)	6 (33.3)	5 (27.8)	4 (22.2)
I	13 (100.0)	3 (23.1)	7 (53.8)	3 (23.1)	
J	23 (99.9)	5 (21.7)	11 (47.8)	6 (26.1)	1 (4.3)
K	20 (100.0)	5 (25.0)	6 (30.0)	7 (35.0)	2 (10.0)
L	20 (100.0)	5 (25.0)	9 (45.0)	6 (30.0)	
M	12 (100.0)	5 (41.7)	1 (8.3)	4 (33.3)	2 (16.7)

¹ omits 2 no data

² omits 1 no data

TABLE 36. Listing of Major Functions

- a. Direct provision of personal services (e.g., medical, nursing laboratory)
- b. Research - collecting and/or analyzing data to yield new facts
- c. Administration and/or management-planning, organizing, directing, controlling, staffing
- d. Program evaluation
- e. Supervision (including training) of staff
- f. Formal teaching - classroom and/or field
- g. Liason work - formal (e.g., committees, speaking before consumer or professional groups) or informal (personal contacts, lobbying)
- h. Consultation - providing information or technical assistance to help others solve problems; formal or informal

TABLE 37. Major Functions Performed by Respondents in Four Job Categories and by All Respondents

Function	All Respondents n=229		Administrator/Manager n=119		Academic/Teaching n=38		Consultant n=15		Practitioner n=52	
	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category
Admin. / man.	83.4	20-29 ²	97.5	40-49 ²	73.7	10-19	80.0	30-39	61.5	15-24
Consul- tation	76.9	10-19 ¹	75.6	<10 ¹	73.7	<10	86.7	20-29	80.8	10-19
Super- vision	72.1	10-19 ²	84.0	10-19 ¹	65.8	10-19 ¹	46.7	<10	57.7	<10
Liason	67.7	<10 ¹	77.3	<10 ¹	57.7	5-14	66.7	5-14	53.8	5-14
Prog. eval.	64.2	<10 ³	72.3	<10 ²	52.6	<10 ¹	73.3	10-19	51.9	<10
Research	62.4	10-19 ²	63.9	<10 ¹	68.4	10-19 ¹	46.7	<10	57.7	10-19
Teaching	61.6	10-19 ²	59.7	<10 ¹	97.4	35-44 ¹	53.3	<10	44.2	10-19
Pers. services	48.5	20-29 ²	44.5	20-29 ²	44.7	20-29	40.0	25-34	63.5	50-59

¹ omits 1 no data² omits 2 no data³ omits 3 no data

TABLE 38. Summary of Major Functions Performed by Respondents
in Four Job Categories and by All Respondents

Function	Job Category				
	All n=229	Admin / man. n=119	Acad. / teach n=38	Consul- tant n=15	Practi- tioner n=52
Admin. /man.	**	**	**	**	**
Consultation	**	*	*	**	**
Supervision	**	**	**		*
Liason	*	*	**	**	**
Prog. Eval.	*	*	*	**	*
Research	**	*	**		**
Teaching	**	*	**	*	
Pers. Services					**

*function performed by $\geq 50\%$ of respondents

**function performed by $\geq 50\%$ of respondents
and occupies $>10\%$ of their work time

Note: omits non-health and research categories; $n \leq 5$

TABLE 39. Major Functions Performed by Respondents in 13 Job Groups

Function	A n=20		B n=13		C n=35		D n=24		E n=16	
	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category
Admin. / man.	100.0	45-54	100.0	10-19 ¹	94.3	40-49	95.8	25-34 ¹	93.7	20-29
Consul- tation	65.0	10-19	61.5	5-14	82.9	10-19	83.3	10-19 ¹	81.3	20-29
Super- vision	85.0	10-19	92.3	10-19 ¹	85.7	10-19	83.3	10-19	37.5	15-24
Liason	80.0	<10	69.2	<10	88.6	10-19	87.5	<10 ¹	68.7	20-29
Prog. eval.	80.0	<10	76.9	<10 ¹	74.3	<10	83.3	10-19 ¹	56.3	10-19
Research	50.0	<10	61.5	<10	54.3	<10	58.3	<10 ¹	68.7	20-29
Teaching	50.0	<10	61.5	<10	57.1	<10	66.7	<10 ¹	25.0	10-19
Pers. services	35.0	25-34 ¹	76.9	30-39 ¹	45.7	15-24	54.2	<10	6.3	10-19

¹ omits 1 no data

TABLE 39. (con't) - Major Functions Performed by Respondents in 13 Job Groups

Function	F n=16		G n=12		H n=16		I n=13		J n=18	
	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category
Admin. / man.	62.5	20-29	58.3	10-19	87.5	20-29	69.2	10-19	66.7	30-39
Consul- tation	68.7	<10	66.7	10-19	93.7	<10	100.0	30-39	66.7	10-19
Super- vision	75.0	<10	50.0	<10	68.7	20-29	69.2	<10	61.1	10-19
Liason	43.7	<10	75.0	10-19	50.0	<10	53.8	<10	38.8	<10
Prog. eval.	37.5	<10	58.3	<10	62.5	5-14	69.2	10-19	38.9	10-19
Research	25.0	<10	58.3	<10	87.5	<10	69.2	10-19	88.9	30-39
Teaching	62.5	10-19	50.0	<10	62.5	<10	38.5	<10	38.9	<10
Pers. services	93.7	≥60	75.0	40-49	37.5	15-24	38.5	40-49	44.4	25-34

TABLE 39. (con't.) - Major Functions Performed by Respondents in 13 Job Groups

Function	K n= 16		L n= 18		M n= 10	
	% yes	Median Time Category	% yes	Median Time Category	% yes	Median Time Category
Admin. /man.	75.0	10-19	77.8	10-19	70.0	10-19
Consultation	56.3	10-19	77.8	<10	90.0	<10
Supervision	56.3	<10	77.8	10-19 ¹	60.0	<10
Liason	62.5	10-19	66.7	10-19	50.0	<10
Prog. eval.	50.0	<10	72.2	5-15 ¹	40.0	<10
Research	43.7	10-19	77.8	10-19 ¹	90.0	20-29
Teaching	87.5	40-49	94.4	15-24 ¹	100.0	45-54
Pers. services	56.3	40-49	27.8	<10	60.0	20-29

¹ omits 1 no data

TABLE 40. Summary of Major Functions Performed by Respondents in 13 Job Groups

Function	A (20) ¹	B (13)	C (35)	D (24)	E (16)	F (16)	G (12)	H (16)	I (13)	J (18)	K (16)	L (18)	M (10)
Admin. /man.	** ³	**	**	**	**	**	**	**	**	**	**	**	**
Consultation	**	**	**	**	**	*	**	*	**	**	**	*	*
Supervision	**	**	**	**		*	*	**	*	**	*	**	*
Liason	* ²	*	**	*	**		**	*	*		**	**	*
Prog. eval.	*	*	*	**	**		*	**	**		*	**	
Research	*	*	*	*	**		*	*	**	**		**	**
Teaching	*	*	*	*		**	*	*			**	**	**
Pers. services		**		*		**	**				*		**

¹ number of respondents in Job Group

² * - function performed by $\geq 50\%$ of respondents

³ ** - function performed by $\geq 50\%$ of respondents
and occupies $\geq 10\%$ of their work time

TABLE 41. Other Major Functions Performed

Function	No. of citations of function
Planning/implementing eg. services, new programs	9
Drafting, writing, editing eg. reports, policy papers	6
Inspection/surveillance eg. of food facilities	5
Disease/epidemic control	5
Related to teaching/training eg. curriculum development	5
Professional self-improvement eg. meetings	4
Medical residency	3
Working with community eg. education, organization	3
Grant/proposal preparation	2
Budget/financial management	2
Inventory/ordering of supplies	2
Other: flying, arbitrating, sampling	15
Total	61

Note: 49 respondents cited a total of 61 additional functions

Table 42. Listing of 44 Activities Scored by Respondents for
"Importance to Your Job"

a. Activities Related to Management/Administration

1. Assessing community health needs.
2. Assessing the effectiveness of existing health services in meeting community health needs
3. Designing or planning programs to meet community health needs.
4. Identifying, mobilizing and coordinating community resources in meeting community health needs.
5. Being aware of cultural differences in working with consumer or patient populations.
6. Planning and implementing community educational programs.
7. Utilizing paraprofessionals and/or volunteers as part of the health team.
8. Being aware of the attitudes of other Health Professionals (e.g., private section) in the community towards community health programs.
9. Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.
10. Using available resources to influence legislative decisions.
11. Introducing changes into the provision of health care.
12. Establishing program goals.
13. Evaluating progress toward goals.
14. Establishing feedback mechanisms for quality control and as indicators for needed change.
15. Developing budgets for your program.
16. Identifying sources of funding; seeking funding.
17. Preparing research or contract proposals.
18. Using cost-benefit and cost-effectiveness analysis.
19. Using cost control data for the day to day management of your program.
20. Establishing priorities for resource allocation.

21. Establishing formal and informal organizational structures to carry out functions.
22. Using the interdisciplinary health team approach to the solution of health problems.
23. Developing and implementing administrative and personnel policies.
24. Collaborating with personnel in developing policies and procedures.
25. Specifying expectations, rewards, sanctions in dealing with personnel.
26. Understanding the relationship of fulfilling basic human needs (e.g., recognition, rewards) to job productivity.
27. Assisting personnel with adaptation to change.
28. Conducting inservice educational and/or training programs.
29. Recognizing and resolving potential and real interpersonal conflict.

b. General Activities Related to Public Health

1. Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.
2. Understanding existing and proposed legislation and its impact on health.
3. Understanding how medical care is financed.
4. Understanding the differences and similarities of health problems in developed and developing countries.
5. Understanding concepts of planning for health services.
6. Understanding problems related to the distribution of health manpower as they affect the solution of health problems.
7. Using epidemiologic methods for the study of community health problems.
8. Collecting, analyzing, interpreting and reporting health related information.
9. Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.
10. Understanding the use of computers for data storage, retrieval and analysis.
11. Identifying environmental hazards to human health.

12. Defining and applying various indices for measuring the level of well being and illness in the community.
13. Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.
14. Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.
15. Interpreting rates, means, medians, standard deviations and tests of statistical significance.

TABLE 43. Frequency Distribution of 44 Activities by Score
and Percent of All Respondents Giving Low ('1-2'),
Middle ('3') and High ('4-5') Scores

Score	Percent Respondents										Total
	<10	10.0-19.9	20.0-29.9	30.0-39.9	40.0-49.9	50.0-59.9	60.0-69.9	70.0-79.9	80.0-89.9	>90.0	
1-2		4 ¹	17	12	5	5	1				44
3		13	31								44
4-5			6	5	4	16	12	1			44

¹ no. of activities scored '1-2' by 10.0-19.9% of all respondents

TABLE 44. Listing of 44 Activities with Percent Respondents Scoring Low ('1 - 2') and High ('4 - 5') for Four Job Categories and All Respondents

Ac- tivity	All n=216-222		Admin. /man. n=115-118		Acad. /teach n=31-35		Consultant n=14-15		Practitioner n=48-51	
	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5
a1	32.3	47.3	22.3	54.7	27.3	45.5	20.0	60.0	58.0	30.0
a2	33.6	44.1	24.8	48.7	42.4	39.4	20.0	66.7	50.0	32.0
a3	28.2	53.7	19.7	60.7	36.4	45.4	26.0	60.0	38.0	44.0
a4	45.7	37.0	38.8	37.9	48.4	36.4	40.0	53.3	58.0	32.0
a5	28.0	53.4	24.8	53.0	17.6	70.5	40.0	46.7	36.0	48.0
a6	43.8	33.8	43.6	32.5	34.2	53.1	53.3	26.7	46.0	24.0
a7	37.6	43.6	26.7	48.2	61.0	30.3	46.7	46.7	40.9	42.8
a8	21.9	53.9	18.0	55.5	18.7	59.4	26.7	66.7	26.0	46.0
a9	10.8	71.5	5.1	77.9	12.1	72.7	20.0	53.4	16.0	64.0
a10	49.5	27.5	38.8	35.4	46.9	34.4	60.0	13.4	70.0	12.0
a11	28.9	44.5	24.2	47.4	18.2	57.6	40.0	40.0	38.7	32.6
a12	16.3	63.5	9.3	69.4	18.2	66.7	20.0	66.6	27.5	47.1
a13	15.8	63.8	10.1	70.3	12.5	65.7	6.7	73.3	31.3	45.1
a14	21.3	58.2	13.7	64.1	21.3	63.7	26.6	53.3	32.0	42.0
a15	40.1	42.3	24.6	62.9	57.6	21.3	40.0	40.0	60.8	27.5
a16	54.6	32.7	46.1	40.2	43.7	37.5	60.0	33.3	74.5	15.7
a17	54.1	25.9	55.5	23.1	27.3	42.4	53.3	33.3	70.0	20.0
a18	54.9	25.4	46.1	33.3	67.7	16.1	50.0	21.4	68.0	14.0
a19	63.5	20.8	51.3	29.0	77.5	19.4	57.1	14.2	85.7	4.0
a20	38.2	41.4	29.6	48.3	46.9	34.4	40.0	40.0	52.0	28.0
a21	28.0	45.4	22.2	51.3	32.3	48.4	40.0	40.0	34.0	32.0
a22	24.3	54.1	20.5	54.7	20.6	58.8	20.0	66.6	33.3	47.1
a23	30.0	46.8	19.7	59.8	27.3	33.3	26.7	33.3	54.0	30.0
a24	21.8	51.9	13.6	63.2	18.2	42.4	20.0	40.0	42.0	34.0
a25	37.0	41.6	23.0	52.2	33.3	42.4	57.1	21.7	42.0	24.0

TABLE 44. (Con't.)

Ac- tivity	All n=216-222		Admin./man. n=115-118		Acad./teach n=31-35		Consultant n=14-15		Practitioner n=48-51	
	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5	% 1-2	% 4-5
a26	25.8	52.9	13.6	65.8	26.5	58.8	40.0	46.7	46.0	22.0
a27	31.2	44.0	18.8	54.7	25.0	56.3	46.7	33.4	55.1	16.4
a28	24.9	52.1	21.4	53.0	25.0	62.5	20.0	53.4	35.5	39.6
a29	27.0	50.3	17.1	59.0	27.2	60.6	33.3	46.6	47.0	24.5
b1	26.4	54.6	22.6	51.3	25.0	68.7	40.0	46.6	28.6	57.2
b2	25.2	52.3	21.5	56.0	25.0	56.2	20.0	53.4	34.0	44.0
b3	36.2	40.4	33.6	47.5	25.0	34.4	33.4	43.3	48.0	26.0
b4	59.9	27.6	57.7	27.6	29.0	48.4	66.7	33.4	80.0	14.0
b5	17.9	57.8	10.3	63.7	9.4	68.8	26.7	46.7	30.0	46.0
b6	25.6	51.8	19.9	57.7	18.8	56.3	20.0	53.3	40.0	40.0
b7	35.3	43.2	37.0	43.9	12.5	65.6	40.0	33.4	46.0	28.0
b8	27.6	52.1	25.8	55.1	19.4	58.0	40.0	40.0	34.0	46.0
b9	33.0	45.5	29.3	49.2	15.6	50.0	46.7	53.3	48.0	32.0
b10	53.5	25.8	51.7	28.5	48.4	32.3	57.1	21.4	62.7	13.7
b11	28.5	55.3	29.3	53.5	19.4	58.0	28.5	64.3	31.4	58.8
b12	40.1	31.8	32.2	31.3	32.3	50.0	50.0	28.6	57.1	24.5
b13	25.2	41.6	34.0	43.5	20.6	53.0	50.0	35.7	43.1	31.3
b14	32.5	50.4	34.5	50.0	20.0	62.8	40.0	40.0	31.4	49.0
b15	38.8	34.7	38.8	31.0	18.2	57.6	50.0	21.4	52.9	29.4

TABLE 45. Frequency Distribution of 44 Activities by Percent High ('4 - 5') and Low ('1 - 2') Scores for Four Job Categories and All Respondents

% Scoring 4-5	Admin. man.	Acad. teach	Consultant	Practitioner	All
≥70	2	2	1	0	1
60.0-69.9	7	9	7	1	2
50.0-59.9	16	14	7	2	16
40.0-49.9	9	7	14	13	14
30.0-39.9	6	9	7	10	5
20.0-29.9	4	1	6	11	6
<20.0	0	2	2	7	0
Total	44	44	44	44	44
% Scoring 1-2	Admin. man.	Acad. teach	Consultant	Practitioner	All
≥70	0	1	0	5	0
60.0-69.9	0	2	3	3	1
50.0-59.9	4	1	9	8	5
40.0-49.9	3	6	14	11	5
30.0-39.9	8	5	2	13	12
20.0-29.9	16	15	15	3	17
<20.0	13	14	1	1	4
Total	44	44	44	44	44

TABLE 46. Listing of Activities Scored High ('4 - 5') by
 ≥ 50% of Respondents in Four Major Job Categories
 and by All Respondents

All n=216-222	Admin. /man. n=115-118	Acad. /Teach. n=31-35	Consultant n=14-15	Practitioner n=48-51
%	%	%	%	%
Item 4-5	Item 4-5	Item 4-5	Item 4-5	Item 4-5
a9 71.5	a9 77.9	a9 72.7	a13 73.3	a9 64.0
a13 63.8	a13 70.3	a5 70.5	a2 66.7	b11 58.8
a12 63.5	a12 69.4	b5 68.8	a8 66.7	b1 57.2
a14 58.2	a26 65.8	b1 68.7	a12 66.6	
b5 57.8	a14 64.1	a12 66.7	a22 66.6	
b11 55.3	b5 63.7	a13 65.7	b11 64.3	
b1 54.6	a24 63.2	b7 65.6	a3 60.0	
a22 54.1	a15 62.9	a14 63.7	a1 60.0	
a8 53.9	a3 60.7	b14 62.8	a9 53.4	
a3 53.7	a23 59.8	a28 62.5	a28 53.4	
a5 53.4	a29 59.0	a29 60.6	b2 53.4	
a26 52.9	b6 57.7	a8 59.4	a4 53.3	
b2 52.3	b2 56.0	a22 58.8	a14 53.3	
b8 52.1	a8 55.5	a26 58.8	b6 53.3	
a28 52.1	b8 55.1	b8 58.0	b9 53.3	
a24 51.9	a22 54.7	b11 58.0		
b6 51.8	a27 54.7	b15 57.6		
b14 50.4	a1 54.7	a11 57.6		
a29 50.3	b11 53.5	a27 56.3		
	a28 53.0	b6 56.3		
	a5 53.0	b2 56.2		
	a25 52.2	a6 53.1		
	a21 51.3	b13 53.0		
	b1 51.3	b12 50.0		
	b14 50.0	b9 50.0		

TABLE 47. Listing of Activities Scored Low ('1 - 2') by
 $\geq 50\%$ of Respondents in Four Job Categories
 and by All Respondents

All n=216-222 %	Admin. /man. n=115-118 %	Acad. /Teach. n=31-35 %	Consultant n=14-15 %	Practitioner n=48-51 %
Item 1-2	Item 1-2	Item 1-2	Item 1-2	Item 1-2
a19 63.5	b4 57.5	a19 77.5	b4 66.7	a19 85.7
b4 59.9	a17 55.5	a18 67.7	a10 60.0	b4 80.0
a18 54.9	b10 51.7	a7 61.0	a16 60.0	a16 74.5
a16 54.6	a19 51.3	a15 57.6	a19 57.1	a10 70.0
a17 54.1			a25 57.1	a17 70.0
b10 53.5			b10 57.1	a18 68.0
			a6 53.3	b10 62.7
			a17 53.3	a15 60.8
			a18 50.0	a1 58.0
			b12 50.0	a4 58.0
			b13 50.0	b12 57.1
			b15 50.0	a27 55.1
				a23 54.0
				b15 52.9
				a20 52.0
				a2 50.0

TABLE 48. Summary of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents in Four Major Job Categories and by All Respondents

						☒ $\geq 50\%$ scored '4' or '5'	
$\frac{n}{222}$		$\frac{n}{118}$	$\frac{n}{35}$	$\frac{n}{15}$	$\frac{n}{51}$		
Item no.	All	Admin. man.	Acad. teach.	Consultant	Practitioner	Item	
a1		X		X		assessing community health needs	
a2				X		assessing effectiveness of services in meeting needs	
a3	X	X		X		designing programs to meet comm. needs	
a4						ident., mobil., co-ord. comm. resources to meet needs	
a5	X	X	X			aware of cultural differences in consumer populations	
a6			X			planning, implementing comm. educational programs	
a7						utilizing paraprof. or vols. in health team	
a8	X	X	X	X		awareness of attitudes of comm. health professionals	
a9	X	X	X	X	X	using appropriately power, persuasion, infl. and collab.	
a10						using resources to influence legislative decisions	
a11			X			introducing changes into provision of health care	
a12	X	X	X	X		establishing program goals	
a13	X	X	X	X		evaluating progress toward goals	
a14	X	X	X	X		establishing feedback mechanisms	
a15		X				developing budgets for program	
a16						identifying sources of funding, seeking funding	
a17						preparing research or contract proposals	
a18						using cost benefit, cost-effectiveness analysis	
a19						using cost control for day to day management	
a20						establishing priorities for resource allocation	
a21		X				establishing formal, informal org. structures	
a22	X	X	X	X		using interdisciplinary team approach	
a23		X				developing, implementing admin. and personnel policies	
a24	X	X				collab. with personnel in develop. policies, procedures	
a25		X				specifying expectations, rewards, sanctions to personnel	
a26	X	X	X			human needs fulfillment related to job productivity	

TABLE 48. Activities Scored High ('4 - 5') continued

Item no.	All	Admin-man	Acad. / teach	Consultant	Practitioner	Item
a27		X	X		X	assisting personnel with adaptation to change
a28	X	X	X	X		conducting inservice education programs
a29	X	X	X			resolving potential, real interpersonal conflict
b1	X	X	X			understanding crisis care vs health maint. care
b2	X	X	X	X		understanding legislation and its impact on health
b3						understanding how med. care is financed
b4						health problems in developed vs developing countries
b5	X	X	X			understanding concepts of planning for health serv.
b6	X	X	X	X		distribution of health manpower-impact on health
b7			X			using epid. methods for study of health problems
b8	X	X	X			collecting, analyzing, interpreting health data
b9			X	X		using health related data for planning, research, eval.
b10						understanding use of computers
b11	X	X	X	X	X	identifying environmental hazards to health
b12			X			defining, applying indices for measuring comm. health
b13			X			using A-H-E, multifactorial models-causation problems
b14	X	X	X			knowing microbial agents, risk, factors
b15			X			interpreting rates, means, s.d., tests of significance

TABLE 49. Summary of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents in Four Major Job Categories and by All Respondents

	$\frac{n}{216-222}$	$\frac{n}{115-118}$	$\frac{n}{31-35}$	$\frac{n}{14-15}$	$\frac{n}{48-51}$	☒ $\geq 50\%$ scored '1' or '2'
Item no.	All	Admin. man	Acad. teach	Consultant	Practitioner	Item
a1					X	assessing community health needs
a2					X	assessing effectiveness of services in meeting needs
a3						designing programs to meet comm. needs
a4					X	ident., mobil., co-ord. comm. resources to meet needs
a5						aware of cultural differences in consumer populations
a6				X		planning, implementing comm. educational programs
a7			X			utilizing paraprof. or vols. in health team
a8						awareness of attitudes of comm. health professionals
a9						using appropriately power, persuasion, infl. and collab.
a10				X	X	using resources to influence legislative decisions
a11						introducing changes into provision of health care
a12						establishing program goals
a13						evaluating progress toward goals
a14						establishing feedback mechanisms
a15			X		X	developing budgets for program
a16	X			X	X	identifying sources of funding, seeking funding
a17	X	X		X	X	preparing research or contract proposals
a18	X		X	X	X	using cost benefit, cost-effectiveness analysis
a19	X	X	X	X	X	using cost control for day to day management
a20					X	establishing priorities for resource allocation
a21						establishing formal, informal org. structures
a22						using interdisciplinary team approach
a23					X	developing, implementing admin. and personnel policies
a24						collab. with personnel in develop. policies, procedures
a25				X		specifying expectations, rewards, sanctions to personnel
a26						human needs fulfillment related to job productivity

TABLE 49. Activities Scored Low ('1 - 2') continued

Item no.	All	Admin- man	Acad./ teach	Consu- tant	Practi- tioner	Item
a27					X	assisting personnel with adap- tation to change
a28						conducting inservice education programs
a29						resolving potential, real inter- personal conflict
b1						understanding crisis care vs health maint. care
b2						understanding legislation and its impact on health
b3						understanding how med. care is financed
b4	X	X		X	X	health problems in developed vs developing countries
b5						understanding concepts of planning for health serv.
b6						distribution of health manpower- impact on health
b7						using epid. methods for study of health problems
b8						collecting, analyzing, interpreting health data
b9						using health related data for planning, research, eval.
b10	X	X		X	X	understanding use of computers
b11						identifying environmental hazards to health
b12				X	X	defining, applying indices for measuring comm. health
b13				X		using A-H-E, multifactorial models- causation problems
b14						knowing microbial agents, risk, factors
b15				X	X	interpreting rates, means, s.d., tests of significance

TABLE 50. Listing of 44 Activities with Percent Respondents Scoring High (4 - 5) for 13 Job Groups

10/3/75

No.	Activity	Job Groups												
		A (9-20)	B (21-30)	C (31-40)	D (41-50)	E (51-60)	F (61-70)	G (71-80)	H (81-90)	I (91-100)	J (101-110)	K (111-120)	L (121-130)	M (131-140)
a1	assessing community health needs	45.0	66.7	74.3	66.7	62.6	6.7	33.3	31.3	25.0	29.4	26.2	53.0	22.2
a2	assessing effectiveness of services in meeting needs	45.0	41.7	62.9	75.0	68.8	6.7	41.7	18.8	25.0	21.6	42.8	53.0	12.5
a3	designing programs to meet comm. needs	45.0	50.0	71.5	75.0	87.5	20.0	58.3	43.8	41.7	35.2	35.7	70.5	12.5
a4	ident., mobil., co-ord. comm. resources to meet needs	10.0	50.0	42.8	47.8	68.8	6.7	50.0	12.5	25.0	29.4	50.0	41.2	12.5
a5	aware of cultural differences in consumer populations	45.0	55.0	42.9	75.0	43.8	60.0	66.7	50.0	25.0	29.4	85.7	82.4	33.3
a6	planning, implementing comm. educational programs	10.0	25.0	42.9	41.7	25.0	13.4	41.6	31.3	25.0	11.8	61.6	76.4	12.5
a7	utilizing paraprof. or vols. in health team	50.0	33.0	54.3	70.8	18.8	66.6	75.0	18.8	9.1	43.8	46.2	28.4	11.1
a8	awareness of attitudes of comm. health professionals	45.0	58.3	57.2	62.5	87.6	33.3	41.6	37.6	31.6	47.0	83.4	64.7	33.3
a9	using appropriately power, persuasion, infl. and collab.	85.0	75.0	85.8	79.1	87.5	60.0	50.0	56.1	75.0	38.9	69.3	88.3	44.4
a10	using resources to influence legislative decisions	25.0	33.4	37.2	39.1	50.1	0.0	0.0	12.5	25.0	27.7	41.7	47.0	0.0
a11	introducing changes into provision of health care	45.0	45.5	48.6	58.4	81.3	40.0	33.3	6.3	0.0	23.6	77.0	76.5	11.1
a12	establishing program goals	70.0	58.3	65.8	87.5	75.1	33.3	33.4	68.8	61.6	50.0	69.2	76.4	44.4
a13	evaluating progress toward goals	80.0	58.4	57.2	91.2	68.8	33.3	33.3	68.8	61.6	55.6	75.0	76.4	33.4
a14	establishing feedback mechanisms	70.0	50.0	62.8	75.0	50.0	46.7	33.4	50.1	33.3	64.7	53.0	76.5	55.5
a15	developing budgets for program	55.0	33.3	62.7	54.2	31.3	6.7	33.3	50.1	61.5	33.3	38.5	23.6	22.2
a16	identifying sources of funding, seeking funding	35.0	33.3	48.0	33.4	37.5	6.7	16.6	25.1	30.8	23.6	41.6	29.4	55.5
a17	preparing research or contract proposals	10.0	33.3	20.0	25.0	43.8	6.7	0.0	18.8	41.7	27.8	33.3	35.3	60.0
a18	using cost benefit, cost-effectiveness analysis	45.0	33.3	40.0	25.0	31.3	6.7	8.3	24.1	16.6	11.8	30.0	11.8	11.1
a19	using cost control for day to day management	40.0	16.7	28.5	25.0	25.0	0.0	0.0	31.3	9.1	5.9	40.0	11.8	11.1
a20	establishing priorities for resource allocation	55.0	25.0	60.0	50.0	43.8	20.0	16.6	43.8	25.0	27.8	50.0	47.0	11.1

TABLE 50. (cont.)

		Job Group												
No	Activity	A (10-20)	B (11-12)	C (13-15)	D (16-18)	E (19)	F (20-22)	G (23-25)	H (26)	I (27-29)	J (30-32)	K (33-35)	L (36-38)	M (39-40)
a21	establishing formal, informal org. structures	70.0	25.0	51.4	50.0	56.1	33.4	25.0	11.8	25.0	29.4	66.7	47.1	17.5
a22	using interdisciplinary team approach	60.0	58.1	62.9	66.6	31.3	53.3	50.0	62.5	10.8	29.4	50.0	82.1	33.3
a23	developing, implementing admin. and personnel policies	80.0	75.0	60.0	58.3	50.0	33.3	50.0	37.5	25.0	17.6	23.1	41.2	11.1
a24	collab. with personnel in develop. policies, procedures	85.0	66.6	60.0	62.5	37.5	33.3	41.7	50.1	33.3	35.2	69.2	35.3	33.3
a25	specifying expectations, rewards, sanctions to personnel	75.0	41.6	45.8	54.2	17.5	40.0	16.7	50.1	16.7	11.8	40.0	35.3	33.3
a26	human needs fulfillment related to job productivity	80.0	75.0	57.1	70.8	25.1	46.7	16.7	75.0	8.1	29.4	71.4	58.9	33.3
a27	assisting personnel with adaptation to change	65.0	50.0	31.4	58.1	17.5	26.6	9.1	50.0	16.7	41.1	71.7	58.8	22.2
a28	conducting inservice education programs	45.0	41.7	45.7	70.9	25.1	50.0	27.3	62.5	58.4	47.0	77.0	64.7	50.0
a29	resolving potential, real interpersonal conflict	80.0	75.0	51.4	70.8	17.5	46.7	18.2	50.0	8.3	11.8	69.3	47.1	66.6
b1	understanding crisis care vs health maint. care	45.0	63.7	48.5	70.8	81.3	46.7	90.9	18.8	25.0	43.8	53.9	82.3	17.5
b2	understanding legislation and its impact on health	45.0	81.9	65.7	50.0	75.0	33.4	36.4	43.8	46.2	23.6	53.8	82.1	12.5
b3	understanding how med. care is financed	55.0	45.5	54.3	54.2	87.6	20.0	16.6	18.8	0.0	17.6	46.2	47.0	0.0
b4	health problems in developed vs developing countries	10.0	27.3	31.5	33.3	12.5	20.0	16.7	18.8	0.0	11.1	61.6	43.8	50.0
b5	understanding concepts of planning for health serv.	55.0	54.6	65.7	75.0	81.3	26.7	66.7	37.6	16.7	41.1	77.0	88.2	17.5
b6	distribution of health manpower-impact on health	45.0	72.8	65.7	62.5	81.3	40.0	33.3	37.6	25.0	29.4	69.2	70.6	25.0
b7	using epid. methods for study of health problems	15.0	36.4	68.6	45.8	31.3	13.4	75.0	31.3	33.3	58.9	53.9	58.8	62.5
b8	collecting, analyzing, interpreting health data	25.0	27.3	62.9	58.3	68.8	26.7	50.0	50.0	41.7	76.5	66.7	58.8	50.0
b9	using health related data for planning, research, eval.	15.0	27.3	62.8	54.2	81.3	13.3	11.6	43.8	8.3	64.7	38.5	52.9	62.5
b10	understanding use of computers	25.0	9.1	28.6	25.0	17.5	0.0	16.6	37.6	7.7	15.1	27.3	15.3	37.5
b11	identifying environmental hazards to health	10.0	63.7	68.5	50.0	31.3	46.6	50.0	73.8	100.0	23.5	15.5	58.8	22.5
b12	defining, applying indices for measuring comm. health	15.8	18.2	48.6	29.2	62.5	11.3	11.7	15.6	0.0	12.7	41.6	11.3	13.1
b13	using A-H-E, multifactorial models-causation problems	25.0	45.5	57.1	29.2	25.1	33.3	41.3	50.1	10.8	51.0	50.0	37.5	70.0
b14	knowing microbial agents, risk, factors	35.0	54.5	60.0	41.6	18.8	66.7	50.0	36.3	18.5	58.8	71.4	41.2	80.0
b15	interpreting rates, means, s.d., tests of significance	5.0	18.2	28.6	25.0	11.3	36.7	15.0	32.5	10.8	58.9	58.3	41.1	66.6

TABLE 51. Listing of 44 Activities with Percent Respondents Scoring Low (1 - 2) for 13 Job Groups

No.	Activity	Job Group												
		A (10-20)	B (11-12)	C (13-15)	D (16-20)	E (11)	F (11-15)	G (11-12)	H (16)	I (11-12)	J (16-18)	K (12-14)	L (16-17)	M (18-19)
a1	assessing community health needs	30.0	16.7	14.3	8.3	18.8	86.6	50.0	33.5	50.0	58.8	38.5	11.8	31.1
a2	assessing effectiveness of services in meeting needs	30.0	25.0	14.3	12.5	12.5	73.3	25.0	41.8	58.1	70.6	28.6	29.4	62.5
a3	designing programs to meet comm. needs	20.0	33.3	14.3	8.3	6.3	66.7	25.0	41.8	33.3	41.2	28.5	23.6	62.5
a4	ident., mobil., co-ord. comm. resources to meet needs	60.0	33.3	31.4	21.7	25.1	80.0	50.0	75.0	50.0	58.9	28.6	29.4	87.5
a5	aware of cultural differences in consumer populations	25.0	25.0	25.7	20.8	11.3	26.6	16.6	17.6	58.3	11.2	7.1	11.8	44.4
a6	planning, implementing comm. educational programs	75.0	25.0	34.3	11.6	43.8	60.0	25.0	56.3	58.3	52.9	15.4	11.8	87.5
a7	utilizing paraprof. or vols. in health team	20.0	33.4	17.1	16.7	56.3	20.0	16.6	62.5	90.9	43.8	23.1	64.7	77.8
a8	awareness of attitudes of comm. health professionals	15.0	8.3	11.4	20.8	12.6	33.4	41.7	43.8	8.3	41.2	0.0	11.8	44.4
a9	using appropriately power, persuasion, infl. and collab.	0.0	8.3	5.8	4.2	6.3	6.7	33.4	18.8	16.7	22.3	0.0	5.9	33.3
a10	using resources to influence legislative decisions	50.0	25.0	40.0	39.1	25.1	86.6	83.3	62.6	50.0	58.8	41.7	35.2	77.8
a11	introducing changes into provision of health care	10.0	36.4	17.1	12.5	12.6	26.6	25.0	75.1	51.9	58.8	7.7	17.6	22.2
a12	establishing program goals	0.0	8.3	14.3	8.3	6.3	40.0	25.0	25.1	15.4	27.8	15.4	5.9	33.3
a13	evaluating progress toward goals	5.0	8.3	11.5	1.2	12.6	16.7	33.3	25.0	15.4	22.2	8.3	5.9	22.2
a14	establishing feedback mechanisms	15.0	16.6	11.4	1.2	12.6	40.0	33.3	31.3	41.7	29.4	23.1	11.8	44.4
a15	developing budgets for program	20.0	16.7	20.0	33.3	43.8	86.7	66.6	41.8	15.4	50.0	53.9	53.0	55.5
a16	identifying sources of funding, seeking funding	35.0	58.4	37.2	54.2	56.3	86.7	66.7	75.0	53.9	76.5	58.3	41.1	22.2
a17	preparing research or contract proposals	65.0	66.7	47.1	58.3	56.3	86.7	75.0	68.8	50.0	50.0	50.0	23.6	10.0
a18	using cost benefit, cost-effectiveness analysis	45.0	58.4	40.0	50.0	50.1	93.3	66.7	43.8	50.0	58.8	70.0	64.7	66.6
a19	using cost control for day to day management	55.0	50.0	48.0	58.3	68.8	100.0	75.0	43.8	72.7	43.8	70.0	82.3	88.9
a20	establishing priorities for resource allocation	20.0	50.0	14.3	33.3	37.5	73.3	58.3	37.5	33.3	61.1	33.3	35.3	66.6

TABLE 51. (con't.)

No.	Activity	Job Group												
		A (10-20)	B (11-12)	C (14-15)	D (21-22)	E (16)	F (14-15)	G (11-12)	H (16)	I (11-12)	J (16-17)	K (10-11)	L (16-17)	M (8-13)
a21	establishing formal, informal org. structures	15.0	25.0	20.0	33.4	25.0	26.7	11.7	11.3	25.0	53.0	4.3	29.4	50.0
a22	using interdisciplinary team approach	10.0	8.3	8.6	12.5	50.1	20.0	11.6	25.0	18.5	64.7	28.5	11.8	22.2
a23	developing, implementing admin. and personnel policies	5.0	16.6	17.1	16.7	37.5	46.6	11.7	31.3	58.3	58.9	30.8	23.5	44.4
a24	collab. with personnel in develop. policies, procedures	5.0	16.6	11.5	12.5	25.0	33.3	50.0	31.3	33.4	35.3	15.4	17.7	22.2
a25	specifying expectations, rewards, sanctions to personnel	10.0	33.3	31.5	16.6	43.8	60.0	50.0	31.3	66.6	58.8	33.3	41.2	33.3
a26	human needs fulfillment related to job productivity	5.0	8.3	22.9	8.3	43.8	20.0	58.3	12.5	41.7	53.0	14.2	23.5	55.5
a27	assisting personnel with adaptation to change	20.0	8.3	22.8	16.6	43.8	46.7	54.6	31.3	58.4	58.8	0.0	23.5	44.4
a28	conducting inservice education programs	35.0	16.7	20.0	16.6	56.3	21.4	16.4	18.8	41.6	11.8	15.4	23.5	25.0
a29	resolving potential, real interpersonal conflict	10.0	8.3	22.9	8.3	17.6	20.0	45.5	37.5	66.7	52.9	15.4	29.4	22.2
b1	understanding crisis care vs health maint. care	20.0	27.3	17.2	16.6	0.0	20.0	9.1	62.6	66.7	43.8	23.1	17.6	50.0
b2	understanding legislation and its impact on health	30.0	9.1	11.4	20.8	12.5	60.0	16.4	31.3	7.7	47.1	23.1	11.8	50.0
b3	understanding how med. care is financed	25.0	18.2	25.7	29.1	12.5	40.0	41.6	75.0	83.3	64.7	15.4	17.6	50.0
b4	health problems in developed vs developing countries	80.0	72.7	42.8	58.3	75.1	80.0	66.7	68.8	91.7	58.8	23.1	43.8	12.5
b5	understanding concepts of planning for health serv.	0.0	18.2	5.8	8.4	6.3	46.6	8.3	13.8	41.7	41.2	15.4	0.0	12.5
b6	distribution of health manpower-impact on health	20.0	27.3	11.5	16.6	6.3	40.0	11.7	37.5	51.3	52.9	23.1	5.9	25.0
b7	using epid. methods for study of health problems	65.0	54.6	11.5	41.6	50.1	60.0	58.1	31.3	33.3	23.5	23.1	17.7	0.0
b8	collecting, analyzing, interpreting health data	70.0	54.6	11.5	25.0	18.8	66.7	33.4	18.8	8.3	5.9	33.4	5.9	25.0
b9	using health related data for planning, research, eval.	70.0	27.3	11.4	37.5	6.3	80.0	80.0	43.8	33.4	23.5	15.4	11.8	25.0
b10	understanding use of computers	60.0	72.7	45.7	54.2	33.8	86.6	66.7	62.5	46.2	23.5	53.6	11.2	66.5
b11	identifying environmental hazards to health	65.0	9.1	20.0	33.3	33.8	26.7	11.7	6.3	0.0	41.2	27.3	29.4	0.0
b12	defining, applying indices for measuring comm. health	52.6	63.6	17.1	33.4	12.5	75.1	33.3	50.0	41.6	47.1	33.1	35.3	11.3
b13	using A-H-E, multifactorial models-causation problems	60.0	45.5	20.0	45.8	50.0	46.6	50.0	18.8	30.8	29.4	25.0	25.0	10.0
b14	knowing microbial agents, risk, factors	50.0	36.4	25.7	43.1	75.1	33.3	33.3	12.5	15.4	23.5	14.3	41.2	10.0
b15	interpreting rates, means, s.d., tests of significance	70.0	54.6	25.7	50.0	50.1	60.0	58.3	18.8	46.2	11.8	33.4	23.5	11.1

TABLE 52. Frequency Distribution of 44 Activities by Percent High ('4' or '5') and Low ('1' or '2') Scores for 13 Job Groups

% Scoring	Job Group												
	A	B	C	D	E	F	G	H	I	J	K	L	M
4-5													
≥ 70	10	6	3	13	11	0	2	2	2	1	9	13	2
60.0-69.9	2	4	16	5	6	4	2	5	3	2	10	2	6
50.0-59.9	5	11	8	12	4	2	8	11	1	6	10	8	5
40.0-49.9	11	6	10	4	3	8	6	5	5	7	7	11	3
30.0-39.9	5	7	3	3	12	8	9	9	8	5	5	5	11
20.0-29.9	4	6	4	7	5	8	4	2	11	15	3	3	4
<20.0	7	4	0	0	3	14	13	10	14	8	0	2	13
Total	44	44	44	44	44	44	44	44	44	44	44	44	44

% Scoring	Job Group												
	A	B	C	D	E	F	G	H	I	J	K	L	M
1-2													
≥ 70	5	2	0	0	2	14	3	4	5	3	1	1	5
60.0-69.9	6	2	0	0	1	7	5	6	3	3	0	2	5
50.0-59.9	4	7	0	7	9	0	11	2	13	16	5	1	6
40.0-49.9	1	1	6	3	7	9	8	8	6	9	1	5	5
30.0-39.9	5	6	4	8	4	3	8	13	7	1	6	3	5
20.0-29.9	9	8	12	6	3	10	5	3	1	9	14	13	10
<20.0	14	18	22	20	18	1	4	8	9	3	17	19	8
Total	44	44	44	44	44	44	44	44	44	44	44	44	44

TABLE 53. Listing of Activities Scored High ('4' or '5') by $\geq 50\%$ of Respondents in 13 Job Groups

A n=19-20		B n=11-12		C n=34-35		D n=23-24		E n=16	
Item	σ_{4-5}^2	Item	σ_{4-5}^2	Item	σ_{4-5}^2	Item	σ_{4-5}^2	Item	σ_{4-5}^2
a9	85.0	b2	81.9	a9	85.8	a13	91.7	a8	87.6
a24	85.0	a9	75.0	a1	74.3	a12	87.5	b3	87.6
a13	80.0	a23	75.0	a3	71.5	a9	79.1	a3	87.5
a23	80.0	a26	75.0	b7	68.6	a2	75.0	a9	87.5
a26	80.0	a29	75.0	b11	68.5	a3	75.0	a11	81.3
a29	80.0	b6	72.8	a12	65.8	a5	75.0	b1	81.3
a25	75.0	a1	66.7	b2	65.7	a14	75.0	b5	81.3
a12	70.0	a24	66.6	b5	65.7	b5	75.0	b6	81.3
a14	70.0	b1	63.7	b6	65.7	a28	70.9	b9	81.3
a21	70.0	b11	63.7	b8	62.9	a7	70.8	a12	75.1
a27	65.0	a13	58.4	a2	62.9	a26	70.8	b2	75.0
a22	60.0	a8	58.3	a15	62.9	a29	70.8	a2	68.8
a15	55.0	a12	58.3	a22	62.9	b1	70.8	a4	68.8
a20	55.0	a22	58.3	a14	62.8	a1	66.7	a13	68.8
b3	55.0	a5	55.0	b9	62.8	a22	66.6	b8	68.8
b5	55.0	b5	54.6	a20	60.0	a8	62.5	a1	62.6
a7	50.0	b14	54.5	a23	60.0	a24	62.5	b12	62.5
		a3	50.0	a24	60.0	b6	62.5	a21	56.3
		a4	50.0	b14	60.0	a11	58.4	a10	50.1
		a14	50.0	a8	57.2	a27	58.4	a14	50.0
		a27	50.0	a13	57.1	a23	58.3	a23	50.0
				a26	57.1	b8	58.3		
				b13	57.1	a15	54.2		
				a7	54.3	a25	54.2		
				b3	54.3	b3	54.2		
				a21	51.4	b9	54.2		
				a29	51.4	a20	50.0		
						a21	50.0		
						b2	50.0		
						b11	50.0		

TABLE 53. (cont.) - Listing of Activities Scored High ('4' or '5')
by $\geq 50\%$ of Respondents in 13 Job Groups

F n=14-15		G n=11-12		H n=16		I n=11-13		J n=16-18	
Item	% 4-5	Item	% 4-5	Item	% 4-5	Item	% 4-5	Item	% 4-5
b14	66.7	b1	90.9	b11	93.8	b11	100.0	b8	76.5
a7	66.6	a7	75.0	a26	75.0	a9	75.0	a14	64.7
a5	60.0	a5	66.7	a12	68.8	a12	61.6	b9	64.7
a9	60.0	b5	66.7	a13	68.8	a13	61.6	b7	58.9
a22	53.3	a3	58.3	a22	62.5	a15	61.5	b15	58.9
a28	50.0	a4	50.0	a28	62.5	a28	58.4	b14	58.8
		a9	50.0	b15	62.5			a13	55.6
		a22	50.0	a9	56.3			b13	53.3
		a23	50.0	b14	56.3			a12	50.0
		b8	50.0	a14	50.1				
		b11	50.0	a15	50.1				
		b14	50.0	a24	50.1				
				a25	50.1				
				b13	50.1				
				a5	50.0				
				a27	50.0				
				a29	50.0				
				b8	50.0				

TABLE 53. (cont.) - Listing of Activities Scored High ('4' or '5')
by $\geq 50\%$ of Respondents in 13 Job Groups

K n=10-14		L n=16-17		M n=8-10	
Item	% 4-5	Item	% 4-5	Item	% 4-5
a27	91.7	a9	88.3	b14	80.0
a5	85.7	b5	88.2	b13	70.0
a8	83.4	a5	82.4	b11	67.5
a11	77.0	a22	82.3	a29	66.6
a28	77.0	b1	82.3	b15	66.6
b5	77.0	b2	82.3	b7	62.5
a13	75.0	a11	76.5	b9	62.5
a26	71.4	a14	76.5	a17	60.0
b14	71.4	a6	76.4	a14	55.5
a9	69.3	a12	76.4	a16	55.5
a29	69.3	a13	76.4	a28	50.0
a12	69.2	b6	70.6	b4	50.0
a24	69.2	a3	70.5	b8	50.0
b6	69.2	a8	64.7		
a21	66.7	a28	64.7		
b8	66.7	a26	58.9		
a6	61.6	a27	58.8		
b4	61.6	b7	58.8		
b12	61.6	b8	58.8		
b15	58.3	b11	58.8		
a14	53.9	a1	53.0		
b1	53.9	a2	53.0		
b7	53.9	b9	52.9		
b2	53.8				
a4	50.0				
a20	50.0				
a22	50.0				
a25	50.0				
b13	50.0				

TABLE 54. Listing of Activities Scored Low ('1' or '2') by $\geq 50\%$ of Respondents in 13 Job Groups

A n=19-20 Item 1-2		B n=11-12 Item 1-2		C n=34-35 Item 1-2		D n=23-24 Item 1-2		E n=16 Item 1-2	
b4	80.0	b4	72.7	None		a17	58.3	b4	75.1
a6	75.0	b10	72.7			a19	58.3	b14	75.1
b8	70.0	a17	66.7			b4	58.3	a19	68.8
b9	70.0	b12	63.6			a16	54.2	a7	56.3
b15	70.0	a16	58.4			b10	54.2	a16	56.3
a17	65.0	a18	58.4			a18	50.0	a17	56.3
b7	65.0	b7	54.6			b15	50.0	a28	56.3
b11	65.0	b8	54.6					a18	50.1
a4	60.0	b15	54.6					a22	50.1
b10	60.0	a19	50.0					b7	50.1
b13	60.0	a20	50.0					b15	50.1
a19	55.0							b13	50.0
b12	52.6								
a10	50.0								
b14	50.0								

TABLE 54. (cont.) - Listing of Activities Scored Low ('1' or '2')
by $\geq 50\%$ of Respondents in 13 Job Groups

F n=14-15		G n=11-12		H n=16		I n=11-13		J n=16-18	
Item	σ^2 1-2	Item	σ^2 1-2	Item	σ^2 1-2	Item	σ^2 1-2	Item	σ^2 1-2
a19	100.0	a10	83.3	a11	75.1	b4	91.7	a16	76.5
a18	93.3	a17	75.0	a4	75.0	a7	90.9	a2	70.6
a15	86.7	a19	75.0	a16	75.0	b3	83.3	a19	70.6
a16	86.7	a16	66.7	b3	75.0	b12	81.8	a22	64.7
a17	86.7	a18	66.7	a17	68.8	a19	72.7	b3	64.7
a1	86.6	b4	66.7	b4	68.8	a29	66.7	a20	61.6
a10	86.6	b10	66.7	a7	62.7	b1	66.7	a4	58.9
b10	86.6	a15	66.6	a10	62.6	a25	66.6	a23	58.9
a4	80.0	b7	58.4	b1	62.6	a2	58.4	a1	58.8
b4	80.0	a26	58.3	b10	62.5	a27	58.4	a10	58.8
b9	80.0	a20	58.3	a6	56.3	a5	58.3	a11	58.8
a20	73.4	b15	58.3	b12	50.0	a6	58.3	a18	58.8
a2	73.3	a27	54.6			a23	58.3	a25	58.8
b12	73.3	a1	50.0			b6	53.3	a27	58.8
a3	66.7	a4	50.0			a16	53.9	b4	58.8
b8	66.7	a24	50.0			a11	51.9	a21	53.0
a6	60.0	a25	50.0			a1	50.0	a26	53.0
a25	60.0	b9	50.0			a4	50.0	a6	52.9
b2	60.0	b13	50.0			a10	50.0	a29	52.9
b7	60.0					a17	50.0	b6	52.9
b15	60.0					a18	50.0	a15	50.0
								a17	50.0

TABLE 54. (cont.) - Listing of Activities Scored Low ('1' or '2')
by $\geq 50\%$ of Respondents in 13 Job Groups

K n=10-14		L n=16-17		M n=8-10	
Item	$\frac{\%}{2}$	Item	$\frac{\%}{2}$	Item	$\frac{\%}{2}$
a18	70.0	a19	82.3	a19	88.9
a16	58.3	a7	64.9	a4	87.5
b10	54.6	a18	64.7	a6	87.5
a15	53.9	a15	53.0	a7	77.8
a17	50.0			a10	77.8
a19	50.0			a18	66.6
				a20	66.6
				a2	62.5
				a3	62.5
				b10	62.5
				a15	55.5
				a26	55.5
				a21	50.0
				b1	50.0
				b2	50.0
				b3	50.0

Rev. 11/21/75

TABLE 55. Summary of Activities Scored High (4-5) by 250% of Respondents in 13 Job Groups

No.	Activity	Job Group												
		A	B	C	D	E	F	G	H	I	J	K	L	M
a1	assessing community health needs		X	X	X	X							X	
a2	assessing effectiveness of services in meeting needs			X	X	X							X	
a3	designing programs to meet comm. needs		X	X	X	X		X					X	
a4	ident., mobil., co-ord. comm. resources to meet needs		X			X		X				X		
a5	aware of cultural differences in consumer populations		X		X		X	X	X			X	X	
a6	planning, implementing comm. educational programs											X	X	
a7	utilizing paraprof. or vols. in health team	X		X	X		X							
a8	awareness of attitudes of comm. health professionals		X	X	X	X						X	X	
a9	using appropriate power, persuasion, infl. and collab.	X	X	X	X	X	X	X	X	X		X	X	
a10	using resources to influence legislative decisions					X								
a11	introducing changes into provision of health care				X	X						X	X	
a12	establishing program goals	X	X	X	X	X			X	X	X	X	X	
a13	evaluating progress toward goals	X	X	X	X	X			X	X	X	X	X	
a14	establishing feedback mechanisms	X	X	X	X	X			X		X	X	X	X
a15	developing budgets for program	X		X	X				X	X				
a16	identifying sources of funding, seeking funding													X
a17	preparing research or contract proposals													X
a18	using cost benefit, cost-effectiveness analysis													
a19	using cost control for day to day management													
a20	establishing priorities for resource allocation	X		X	X							X		

TABLE 55. (cont.)

No.	Activity	Job Group												
		A	B	C	D	E	F	G	H	I	J	K	L	M
a21	establishing formal, informal org. structures	x		x	x	x						x		
a22	using interdisciplinary team approach	x	x	x	x		x	x	x			x	x	
a23	developing, implementing admin. and personnel policies	x	x	x	x	x		x						
a24	collab. with personnel in develop. policies, procedures	x	x	x	x				x			x		
a25	specifying expectations, rewards, sanctions to personnel	x			x				x			x		
a26	human needs fulfillment related to job productivity	x	x	x	x				x			x	x	
a27	assisting personnel with adaptation to change	x	x		x				x			x	x	
a28	conducting inservice education programs				x		x		x	x		x	x	x
a29	resolving potential, real interpersonal conflict	x	x	x	x				x			x		x
b1	understanding crisis care vs health maint. care		x		x	x		x				x	x	
b2	understanding legislation and its impact on health		x	x	x	x						x	x	
b3	understanding how med. care is financed	x		x	x	x								
b4	health problems in developed vs developing countries											x		x
b5	understanding concepts of planning for health serv.	x	x	x	x	x		x				x	x	
b6	distribution of health manpower - impact on health		x	x	x	x						x	x	
b7	using epid. methods for study of health problems			x							x	x	x	x
b8	collecting, analyzing, interpreting health data			x	x	x		x	x		x	x	x	x
b9	using health related data for planning, research, eval.			x	x	x					x		x	x
b10	understanding use of computers													
b11	identifying environmental hazards to health		x	x	x			x	x	x			x	x
b12	defining, applying indices for measuring comm. health					x						x		
b13	using A-H-E, multifactorial model - causation problems			x					x		x	x		x
b14	knowing microbial agents; risk, factors		x	x			x	x	x		x	x		x
b15	interpreting rates, means, s.d., tests of significance								x		x	x		x

TABLE 56. Summary of Activities Scored Low (1-2) by 250% of Respondents
in 13 Job Groups

Rev. 11/21/75

No.	Activity	Job Group												
		A	B	C	D	E	F	G	H	I	J	K	L	M
a1	assessing community health needs						X	X		X	X			
a2	assessing effectiveness of services in meeting needs						X			X	X			X
a3	designing programs to meet comm. needs						X							X
a4	ident., mobil., co-ord. comm. resources to meet needs	X					X	X	X	X	X			X
a5	aware of cultural differences in consumer populations									X				
a6	planning, implementing comm. educational programs	X					X		X	X	X			X
a7	utilizing paraprof. or vols. in health team					X			X	X			X	X
a8	awareness of attitudes of comm. health professionals													
a9	using appropriately power, persuasion, infl. and collab.													
a10	using resources to influence legislative decisions	X					X	X	X	X	X			X
a11	introducing changes into provision of health care								X	X	X			
a12	establishing program goals													
a13	evaluating progress toward goals													
a14	establishing feedback mechanisms													
a15	developing budgets for program						X	X			X	X	X	X
a16	identifying sources of funding, seeking funding		X		X	X	X	X	X	X	X			
a17	preparing research or contract proposals	X	X		X	X	X	X	X	X	X	X		
a18	using cost benefit, cost-effectiveness analysis		X		X	X	X	X		X	X	X	X	X
a19	using cost control for day to day management	X	X		X	X	X	X		X	X	X	X	X
a20	establishing priorities for resource allocation		X				X		X		X			X

TABLE 56. (cont.)

No.	Activity	Job Group												
		A	B	C	D	E	F	G	H	I	J	K	L	M
a21	establishing formal, informal org. structures										X			X
a22	using interdisciplinary team approach					X					X			
a23	developing, implementing admin. and personnel policies									X	X			
a24	collab. with personnel in develop. policies, procedures							X						
a25	specifying expectations, rewards, sanctions to personnel						X	X		X	X			
a26	human needs fulfillment related to job productivity							X			X			X
a27	assisting personnel with adaptation to change							X		X	X			
a28	conducting inservice education programs					X								
a29	resolving potential, real interpersonal conflict									X	X			
b1	understanding crisis care vs health maint. care								X	X				X
b2	understanding legislation and its impact on health						X							X
b3	understanding how med. care is financed								X	X	X			X
b4	health problems in developed vs developing countries	X	X		X	X	X	X	X	X	X			
b5	understanding concepts of planning for health serv.													
b6	distribution of health manpower-impact on health									X	X			
b7	using epid. methods for study of health problems	X	X			X	X	X						
b8	collecting, analyzing, interpreting health data	X	X				X							
b9	using health related data for planning, research, eval.	X					X	X						
b10	understanding use of computers	X	X		X		X	X	X			X		X
b11	identifying environmental hazards to health	X												
b12	defining, applying indices for measuring comm. health	X	X				X		X	X				
b13	using A-I-I-E, multifactorial models-causation problems	X				X		X						
b14	knowing microbial agents; risk, factors	X				X								
b15	interpreting rates, means, s.d., tests of significance	X	X		X	X	X	X						

Table 57.. Listing of 29 Activities Scored High¹ by ≥ 3 of the 6
Administrative/Managerial Job Groups (A, B, C, D, E, and H)

Scored High by 6 Job Groups

- a9 Using appropriately power, persuasion, influence and collaboration to help your program reach its goals
- a12 Establishing program goals
- a13 Evaluating progress toward goals
- a14 Establishing feedback mechanisms for quality control and as indicators for needed change

Scored High by 5 Job Groups

- a5 Being aware of cultural differences in working with consumer or patient populations
- a22 Using the interdisciplinary health team approach to the solution of health problems
- a23 Developing and implementing administrative and personnel policies
- a24 Collaborating with personnel in developing policies and procedures
- a26 Understanding the relationship of fulfilling basic human needs (e. g. , recognition, rewards) to job productivity
- a29 Recognizing and resolving potential and real interpersonal conflict
- b5 Understanding concepts of planning for health services

Scored High by 4 Job Groups

- a1 Assessing community health needs
- a3 Designing or planning programs to meet community health needs
- a8 Being aware of the attitudes of other Health Professionals (e. g. , private sector) in the community towards community health programs
- a15 Developing budgets for your program
- a21 Establishing formal and informal organizational structures to carry out functions
- a27 Assisting personnel with adaptation to change
- b2 Understanding existing and proposed legislation and its impact on health
- b3 Understanding how medical care is financed
- b6 Understanding problems related to the distribution of health manpower as they affect the solution of health problems
- b8 Collecting, analyzing, interpreting and reporting health related information

¹ scored '4 - 5' by $\geq 50\%$ of respondents

Table 57. cont., Listing of 29 Activities Scored High

Scored High by 3 Job Groups

- | | |
|-----|---|
| a2 | Assessing the effectiveness of existing health services in meeting community health needs |
| a7 | Utilizing paraprofessionals and/or volunteers as part of the health team |
| a20 | Establishing priorities for resource allocation |
| a25 | Specifying expectations, rewards, sanctions in dealing with personnel |
| b1 | Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care |
| b9 | Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation |
| b11 | Identifying environmental hazards to human health |
| b14 | Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common non-infectious diseases |

Table 58. Listing of 9 Activities Scored Low¹ by ≥ 3 of the 6 Administrative/Managerial Job Groups (A, B, C, D, E, and H)

Scored Low by 6 Job Groups

none

Scored Low by 5 Job Groups

- a17 Preparing research or contract proposals
- b4 Understanding the differences and similarities of health problems in developed and developing countries

Scored Low by 4 Job Groups

- a16 Identifying sources of funding; seeking funding
- a19 Using cost control data for the day to day management of your program
- b10 Understanding the use of computers for data storage, retrieval and analysis
- b15 Interpreting rates, means, medians, standard deviations and tests of statistical significance

Scored Low by 3 Job Groups

- a18 Using cost-benefit and cost-effectiveness analysis
- b7 Using epidemiologic methods for the study of community health problems
- b12 Defining and applying various indices for measuring the level of well being and illness in the community

¹ scored '1 - 2' by $\geq 50\%$ of respondents

TABLE 59. Other Activities of Major Importance
Cited by Respondents

No. of citations	Activity
48	<u>Organization and extramural relations</u> 17 - to community 7 - selling policy to community; good public relations 5 - getting involved with community e. g. advice and consent 3 - changing community behavior patterns 2 - providing service to community 20 - to other organizations 7 - knowledge of their structure, functions, policies 6 - co-ordinating, communicating 2 - negotiating (e. g. unions, insurance) 2 - providing consultation 3 - other 11 - to the supra-organization e. g. fed. hospital - fed. government 3 - knowledge of its structure, function, policies 3 - co-ordinating, communicating 3 - conforming to its policies 2 - other
45	<u>Person to person relationships</u> 20 - personnel management 6 - recruitment 4 - staff development, evaluation 4 - work assignments 3 - developing or implementing personnel policies 3 - other 25 - personal interaction 7 - understanding human behavior e. g. internal politics, relating to co-workers 6 - ability to work with others, professionals and lay persons 5 - broadening perspective of others regarding professional matters 7 - other e. g. resolving communications problems (2), promoting teamwork (2)

TABLE 59. Other Activities of Major Importance
Cited by Respondents (cont.)

No. of citations	Activity
35	<u>Having or applying knowledge in specific areas</u> 5 - infectious, communicable diseases 5 - occupational health, safety 4 - environmental sanitary 4 - clinical e.g. medicine, physical assessment 3 - behavioral sciences 3 - legal 3 - field research, field investigation 8 - other e.g. applied nutrition (2), languages (1)
14	<u>Education, training</u> 6 - teaching, formal and informal 5 - development of curriculum, teaching materials 2 - educational administration 1 - developing confidence in teachers
7	<u>Organization and political process</u> 5 - promoting or opposing official change 2 - other: presenting info. (1) understanding legislative process (1)
4	<u>Organization responding to official policy</u> 2 - interpreting, selling to community professionals e.g. HMO's, PSRO's 2 - other: modification of jobs in org. (1), modifying org. activities - OSHA (1)
57	<u>Miscellaneous</u> 8 - informal problem solving: recognizing; devising and implementing solutions 6 - writing, communicating effectively e.g. reports, presentations 5 - keeping current e.g. literature, technical developments 4 - planning, developing, implementing new services 4 - managing, co-ordinating services 3 - collecting, utilizing data about community 3 - participating in professional organizations 3 - financial management, budgets 19 - other e.g. field studies (2), keeping good records (2) ordering supplies, equipment (2) etc. 2 - insufficient information to classify

Note: A total of 210 activities were cited by 90 respondents.

TABLE 60. Distribution of Other Activities Citations for All Respondents
Four Major Job Categories and Job Groups A-E H

Other Activities	All		Job Category								Job Groups A-E+H Combined	
			Admin. /man		Acad. /teach.		Consult		Practitioner		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Organization and extramural relations	48	22.8	27	24.3	9	21.4			12	28.6	23	21.9
to community	17		11		2				4		9	
to other organizations	20		10		6				4		10	
to supraorganization	11		6		1				4		4	
Person to person relationships	45	21.4	35	31.5	1	2.4	2	20.0	5	11.9	32	30.5
personnel management	20		17						2		15	
personal interaction	25		18		1		2		3		17	
Having or applying knowledge in specific areas	35	16.7	14	12.6	7	16.7	1	10.0	13	30.9	12	11.4
Education, training	14	6.7	2	1.8	10	23.8			1	2.4	1	0.9
Organization and political process	7	3.3	4	3.6	2	4.8	1	10.0	1	2.4	5	4.8
Organization responding to official policy	4	1.9	2	1.8		30.9	1	10.0	1	2.4	3	2.9
Miscellaneous	55	26.2	26	23.4	13	30.9	5	50.0	8	19.0	28	26.7
Insufficient information to classify	2	1.0	1	1.0					1	2.4	1	0.9
TOTAL	210	100.0	111	100.0	42	100.0	10	100.0	42	100.0	105	100.0

TABLE 61. New Activities (350 citations)

<u>Organization responding to official policies or legislation</u>	<u>79</u>
expanding/changing scope of activities	37
in response to	
national health insurance, HMO's	15
OSHA, EPA, consumer product safety	11
other (NCI, Dept. Defense, Health Resources Planning)	3
unspecified, general	8
coping with adverse effects	20
decreased funding, personnel	9
red tape, interference	5
other eg. job uncertainty, lower quality personnel, legislative loopholes	6
modification of job-activities, qualifications eg. affirmative action	6
implementing official policy in community eg. regulation of care providers, food processors	6
supplying required information eg. PSRO's	4
interpreting, selling policy to community	3
greater involvement with official agencies	3
<u>Organization and extramural relationships</u>	<u>50</u>
to the community	39
getting involved eg. being accountable, responsive, providing service	19
changing community behavior patterns eg. education, motivation, organizing for political activity	15
selling policy, coping with negative attitudes	5
to other organizations	11
communicating, coordinating, integrating	6
providing consultation	3
other (bargaining; knowing structure, functions, policies)	2

TABLE 61. New Activities (350 citations) cont.

<u>Relating to health care delivery and delivery systems</u>	<u>48</u>
greater use of paraprofessionals	13
more emphasis on preventive care, preventive medicine	7
increasing role of p.h. workers in patient care systems	6
more emphasis on comprehensive, integrated care	5
shift to ambulatory, home care	5
seeking means to remove financial barriers with simpler, cheaper alternatives	5
general awareness of changes	3
other eg. more family practitioners, upgraded care for small communities, emphasis on school care, emergency response	4
<u>Relating to management/administration</u>	<u>35</u>
financial management, cost analysis	9
planning, developing, implementing new services, programs	8
personnel management	6
managing, coordinating, organizing	5
use of systems theory, O-R	4
other (manpower analysis, organizational theory)	3
<u>Organization and political process</u>	<u>22</u>
pressuring for official acceptance of change	8
entering into political process	7
understanding role, contribution of politics	7
<u>Education, teaching, training</u>	<u>20</u>
changes in approach	11
helping students understand, adapt to change	4
teaching to assume new roles	3
more emphasis on community as opposed to clinical	2
broadier, less specialized	2
continuing education	6
training of paraprofessionals	2
other (curriculum development)	1

TABLE 61. New Activities (350 citations) cont.

<u>Environmental health</u>	<u>19</u>
general, sanitary	9
occupational health, safety	6
recognition of environmental hazards	4
 <u>Research</u>	 <u>12</u>
evaluation of programs, services	6
general, applied	6
 <u>Personal relationships, leadership</u>	 <u>12</u>
developing team approach	6
other eg. facilitating change, broadening perspective of others	6
 <u>Data collection, management</u>	 <u>10</u>
data management, processing	7
collection, utilization of data from community	3
 <u>Assuming new roles</u>	 <u>6</u>
nurse-practitioner	4
other (top administrative, sex counseling)	2
 <u>Having greater knowledge in</u>	 <u>10</u>
clinical sciences	4
basic biomedical sciences	2
behavioral sciences (sociology)	2
other (foreign languages, demography)	2
 <u>General activities</u>	 <u>27</u>
no new ones as yet	5
adjusting to compromise, to gap between knowledge and application	4
need for integrated approach to multiple problems in developing areas	4
adapting, utilizing new methods, technologies	4
informal problem solving	3
seeking sources of funding	2
keeping current	2
other (pet animal pop. control, infection con- trol, use of paraprofessionals in other than health care)	3

Note: a total of 350 future activities were cited by 149 respondents

12/9/75

Table 62. Distribution of New Activities Citations for All Respondents and Four Job Categories

Type of New Activity	All n = 220		Job Category							
			Admin/ Man n = 119		Acad/ teach n = 38		Consul- tants n = 15		Practi- tioners n = 52	
	no.	%	no.	%	no.	%	no.	%	no.	%
In response to official policies or legislation	79	22.6	47	22.5	6	13.9	7	35.0	19	26.4
Organization and extra-mural relationships	50	14.3	32	15.3	6	13.9	1	5.0	10	13.9
Relating to health care delivery	48	13.7	33	15.8	2	4.7	2	10.0	11	15.3
Management/adminis- tration	35	10.0	26	12.4	1	2.3	1	5.0	6	8.3
Organization and political process	22	6.3	15	7.2	3	7.0			4	5.5
Education/teaching/ training	20	5.7	7	3.3	10	23.3	2	10.0		
Environmental health	19	5.4	11	5.3			2	10.0	6	8.3
Research	12	3.4	3	1.4	3	7.0	1	5.0	3	4.2
Personal relationships/ leadership	12	3.4	9	4.3	2	4.7	1	5.0		
Data collection/ management	10	2.9	4	1.9	1	2.3	1	5.0	3	4.2
Assuming new roles	6	1.7	2	1.0	4	9.3				
Greater knowledge	10	2.9	5	1.4	3	7.0	1	5.0	3	4.2
Miscellaneous	27	7.7	17	8.1	2	4.7	1	5.0	7	9.7
Total no. of citations	350	100.0	209	99.9	43	100.1	20	100.0	72	100.0
by % respondents	66.4		68.9		52.6		66.7		71.1	

12/9/75

Table 63. Distribution of New Activities Citations for 13 Job Groups

Type of New Activity	A n = 20 ¹		B n = 13		C n = 35		D n = 24		E n = 16	
	no.	%	no.	%	no.	%	no.	%	no.	%
In response to official policies or legislation	8	19.5 ²	7	46.7	8	15.4	5	11.1	10	33.3
expanding/changing scope of activities	2		4		4		2		6	
coping with adverse effects	4		1		2		3		2	
other	2		2		2				2	
Org. and extramural relationships	6	14.6			8	15.4	6	13.3	1	3.3
to community	6				4		5		1	
to other organizations					4		1			
Relating to health care delivery	10	24.4	5	33.3	4	7.7	11	24.4	2	6.7
changes in delivery system	5		4		4		5		1	
greater use of para-professionals	2		1				5			
other	3						1		1	
Management/administration	8	19.5			5	9.6	7	15.6	9	30.0
Organization and political process	3	7.3			4	7.7	3	6.7	3	10.0
Education/teaching/training	1	2.4	1	6.7	3	5.3			1	3.3
Environmental health					11	21.1				
Research	1	2.4					2	4.4	1	3.3
Personal relationships/leadership					3	5.8	3	6.7	1	3.3
Data collection, management	1	2.4	1	6.7			1	2.2	1	3.3
Assuming new roles					1	1.9	1	2.2		
Greater knowledge	1	2.4			1	1.9	2	4.4	1	3.3
Miscellaneous	2	4.9	1	6.7	4	7.7	4	8.9		
Total no. of citations	41	99.8	15	100.1	52	100.0	45	99.7	30	99.8
by % respondents		30.0		53.3		60.0		70.8		93.7

¹ number of persons in Job Group² percent of total citations

Table 63. cont.

Type of New Activity	F n = 16		G n = 12		H n = 16		I n = 13		J n = 18	
	no.	%	no.	%	no.	%	no.	%	no.	%
In response to official policies or legislation	7	33.3	2	12.5	10	32.3	8	33.3	4	23.5
expanding/changing scope of activities	1		1		4		5		2	
coping with adverse effects	6				1				1	
other			1		5		3		1	
Org. and extramural relationships	4	19.0	5	31.3	10	32.3	1	4.2		
to community	3		3		10		1			
to other organizations	1		2							
Relating to health care delivery	5	23.3	3	18.7	1	3.2	1	4.2	2	11.3
changes in delivery system	1		2		1				1	
greater use of para-professionals	4		1							
other							1		1	
Management/administration	1	4.8	2	12.5	1	3.2	1	4.2		
Organization and political process			2	12.5	1	3.2	1	4.2		
Education/teaching/training									1	5.9
Environmental health					1	3.2	6	25.0	1	5.9
Research	1	4.8					1	4.2	3	17.6
Personal relationships/leadership					2	6.3				
Data collection, management	1	4.8					1	4.2	3	17.6
Assuming new roles										
Greater knowledge	1	4.8	1	6.3						
Miscellaneous	1	4.8	1	6.3	5	16.1	4	16.7	3	17.6
Total no. of citations	21	100.1	16	100.1	31	100.0	24	100.2	17	99.9
by % respondents		62.5		75.0		68.7		76.9		50.0

Table 63. cont.

Type of New Activity	K n = 16		L n = 18		M n = 10	
	no.	%	no.	%	no.	%
In response to official policies or legislation	5	29.4	5	18.5		
expanding/changing scope of activities	3		3			
coping with adverse effects	1					
other	1		2			
Org. and extramural relationships	2	11.8	5	18.5	1	8.3
to community	2		2		1	
to other organizations			3			
Relating to health care delivery	1	5.9	2	7.4	1	8.3
changes in delivery system	1		2		1	
greater use of para-professionals						
other						
Management/administration					1	8.3
Organization and political process	1	5.9	4	14.8		
Education/teaching/training	5	29.4	5	19.5	2	16.7
Environmental health						
Research			1	3.7	2	16.7
Personal relationships/leadership		5.9	1	3.7	1	8.3
Data collection, management					1	8.3
Assuming new roles			4	14.8		
Greater knowledge	1	5.9			2	16.7
Miscellaneous	1	5.9			1	8.3
Total no. of citations	17	100.1	27	99.9	12	99.9
by % respondents		43.7		51.1		70.0

Table 64. Summary of Citations to New Activities by Job Group

12/11/75

Type of New Activity	Job Group												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Response to official policies or legislation	* ¹	*** ³	*	*	***	***	*	***	***	**	**	*	
Org. extramural relationships	*		*	*		*	***	***		*	*	*	
Hlth. care delivery	** ²	***		**		**	*						
Management/administration	*			*	***		*						
Org. -political process					*		*					*	
Education/teaching/training											**	*	*
Environmental Health Research			**						**				*
Personal relationships										*			*
Data collection/management										*			
Assuming new roles												*	
Greater knowledge													*
Miscellaneous								*	*	*			
No. of citations	41	15	52	45	30	21	16	31	24	17	17	27	12

¹ includes 10.0-19.9% of total citations² includes 20.0-29.9% of total citations³ includes ≥ 30.0% of total citations

TABLE 65. Valuable Learning Experiences-Specific
(566 citations)

Area	No. of citations
<u>Administration/management</u> ¹	<u>153</u>
General	66
public/public health administration	30
health services administration	14
medical care administration	14
health manpower development	5
hospital administration	1
administration	2
Planning courses	16
Field experience, internship	14
Practical problem solving courses	9
Public health law, health legislation	8
O-R, systems theory	7
Community organization	6
Business School courses, general and specific other	6
Financial management, accounting	5
Economics	4
Community health, preventive aspects	4
Health systems of other countries	3
Personnel management	3
Other (seminars, geriatric health)	2
<u>Epidemiology</u>	<u>96</u>
General	58
As basis for problem solving, research study design, reading literature	9
Communicable diseases, zoonoses, epidemic investigation	14
Field epidemiology	12
Other (eg. seminar, chronic disease)	3
<u>Biostatistics</u>	<u>80</u>
General	46
As basis for data management, analysis, reading literature, prog. evaluation, etc.	14
Computers, programming	10
Survey sampling	5
Other (eg. math. models, non-parametrics)	5

¹ includes citations to PHA, HSA, MCA, HA, HMD and Business School courses

124

TABLE 65. Valuable Learning Experiences -
Specific (566 citations) cont.

Area	No. of citations
<u>Environmental health</u> ²	<u>51</u>
General	16
Chemical, engineering, technical	10
Occupational, industrial	9
Sanitation inc. field trips	7
Air	5
Water, radiologic	4
<u>Mental health</u>	<u>29</u>
General	3
Group process, group dynamics	11
Field work, research	8
Consultation theory	5
Research principles	2
<u>Public health nursing</u>	<u>21</u>
General	4
Field work, research	10
Nursing supervision, administration	3
Seminar	2
Other (leadership proj., planning)	2
<u>Education/communications</u> ³	<u>20</u>
General including health education, principles, curriculum devel. etc.	16
Communications	3
Practice teaching	1
<u>Tropical medicine</u>	<u>19</u>
General	10
Ecology, pesticides	6
Clinical tropical medicine	3
<u>Microbiology</u>	<u>15</u>
General	3
Clinical, laboratory experience	5
Immunology	4
Mycology	3
<u>Nutrition</u>	<u>13</u>
General	12
Research	1

² includes citations to Engineering School courses

³ includes citations to courses in PHN, TM and Dept. of Education

TABLE 65. Valuable Learning Experiences -
Specific (566 citations) cont.

Area	No. of citations
<u>Family health, family planning</u>	<u>12</u>
General	3
Work-study, job experience	5
Other (eg. reproductive physiol., The Family)	4
<u>International health</u>	<u>11</u>
General	7
Health progs for developing countries, cultural aspects	2
Other (final exam project, exposure to IH workers)	2
<u>Parasitology</u>	<u>10</u>
General	5
Helminthology	3
Protozoology, entomology	2
<u>Maternal child health</u>	<u>10</u>
General	3
International aspects	4
Other (eg. planning, growth and development)	3
<u>Social, behavioral courses inc. Man and Social Environment, Dept. of Sociology courses</u>	<u>9</u>
<u>Population Studies</u>	<u>4</u>
General	1
Population dynamics	3
<u>Misc. biomed. courses inc. biology, health sciences, clinical medicine</u>	<u>6</u>
<u>Other</u>	<u>7</u>
SPHTM core courses	3
Courses in other schools of T.U.	3
All action oriented courses	1
Total	566

TABLE 66. Valuable Learning Experiences -
General (154 citations)

<u>Global experiences</u>	<u>43</u>
broadened understanding of public health inc. relationship of p.h. and politics, personal health services, multifactorial elements in etc.	14
broadened understanding of other societies and their problems	7
systematic approach to problem solving	4
all useful, generally useful	9
nothing useful	3
other (return to academic setting 2, personal maturation 4)	6
<u>Stimulus of personal interaction</u>	<u>32</u>
with other students, foreign students	12
with other health professionals	11
with faculty	9
<u>Related to teaching/learning process</u>	<u>28</u>
self directed studies inc. thesis, dissertation, special studies	12
individualized programs	4
small classes	4
giving formal presentations	4
eg. seminar	
mixture of students in class	3
free exchange of ideas in seminars	1
<u>Practical experiences</u>	<u>28</u>
applying theory to real world, work-study, field studies, field experiences	22
writing reports, proposals	4
teaching	2
<u>Interdisciplinary approach to solving health problems, to health services, research etc.</u>	<u>11</u>
<u>Other</u>	<u>12</u>
serving as class officer, on SPHTM committee	3
using language lab	3
SPHTM degree for status or certification	3
faculty behavior as negative model	2
Dean's hours	1

Table 67. Distribution of Citations of Valuable Learning Experiences for All Respondents and Four Job Categories

Area	All n = 229		Job Category							
			Admin/Man n = 119		Acad/teach n = 38		Consultants n = 15		Practitioners n = 52	
	no.	%	no.	%	no.	%	no.	%	no.	%
Admin/man	153	21.2	102	26.1	9	9.3	11	32.4	29	20.1
Epidemiology	96	13.3	54	13.8	15	10.7	4	11.8	20	14.4
Biostatistics	80	11.1	44	11.3	13	9.3	1	2.9	14	10.1
Env. Health	51	7.1	20	5.1	7	5.0			24	17.3
Mental Health	29	4.0	10	2.6	10	7.1	2	5.9	6	4.3
P. H. N.	21	2.9	6	1.5	11	7.3	1	2.9	3	2.2
Educa/comm.	20	2.8	5	1.3	11	7.8	3	8.8	1	0.7
Trop. Med.	19	2.6	12	3.1	3	2.1			4	2.9
Micro.	15	2.1	8	2.1	6	4.3			1	0.7
Other Specific ¹	32	11.4	50 ²	12.3	19 ³	13.6	1 ⁴	2.9	12 ⁵	8.6
Global	43	6.0	19	4.9	7	5.0	5	14.7	9	5.9
Stimulus	32	4.4	21	5.4	5	3.6			5	3.6
Teach/learn	28	3.9	16	4.1	6	4.3	2	5.9	4	2.9
Practical	28	3.9	10	2.6	12	3.6	3	9.8	2	1.4
Interdisciplinary	11	1.5	6	1.5	1	0.7	1	2.9	2	1.4
Other	12	1.7	7	1.8	1	0.7			5	3.6
Total citations	720	99.9	390	100.0	140	99.9	34	99.9	139	100.0
given by % respondents		87.3		89.1		92.1		66.7		96.5

¹ includes Nutr., Fam. Hlth., Int. Hlth., Parasit., MCH, Soc. behav. courses, Pop. Studies, Mics. biomed. courses and other misc. courses. With the exceptions noted below, no one area received $\geq 2\%$ of total citations

² includes Nutr. - 3 (2.1%), Fam. Hlth. - 3 (2.1%), Int. Hlth. - 10 (2.6%), Soc. behav. courses - 8 (2.1%)

³ includes Fam. Hlth. - 3 (2.1%), Parasit. - 7 (5.0%)

⁴ Fam. Hlth - 1 (2.9%)

⁵ includes Nutr. - 3 (2.1%), MCH - 6 (4.3%)

Table 68. Distribution of Citations of Valuable Learning Experiences for 13 Job Groups

Area	A n = 20		B n = 13		C n = 35		D n = 24		E n = 16	
	no.	%	no.	%	no.	%	no.	%	no.	%
Admin/man	24	38.1	9	20.5	25	21.0	14	17.5	26	46.4
Epidemiology	6	9.5	7	15.9	18	15.1	12	15.0	4	7.1
Biostatistics	4	6.3	4	9.1	11	9.2	10	12.3	7	12.3
Env. Health	7	11.1			9	7.6	1	1.3		
Mental Health	2	3.2	2	4.5	1	0.8	1	1.3	1	1.8
P. H. N.			4	9.1			3	3.7		
Educa/comm.	1	1.6	1	2.3	3	2.5	1	1.3		
Trop. Med.	2	3.2	1	2.3	6	5.0	2	2.5		
Micro.					2	1.7				
Other specific ¹	6 ²	9.5	2 ³	4.6	19 ⁴	16.0	19 ⁵	22.5	3	5.3
Global	3	4.8	3	6.3	3	6.7	2	2.5	5	8.9
Stimulus	2	3.2	1	2.3	6	5.0	4	5.0	3	5.4
Teach/learn.	3	4.8			3	4.2	3	5.2	3	5.4
Practical			2	4.5	4	3.4	4	5.0	1	1.8
Interdisciplinary	2	3.2	1	2.3			1	1.3	2	3.6
Other	1	1.6	7	15.9	2	1.7	2	2.5	1	1.3
Total Citations	63	100.1	44	100.1	119	99.9	90	100.1	56	100.0
by % respondents		95.0		76.9		95.7		71.7		97.5

¹ includes Nutr., Fam. Hlth., Parasit., MCH, Soc. behav. courses, Pop. Studies, misc. biomed. courses, and other misc. courses. With the exceptions noted below, no one area received $\geq 2\%$ of total citations.

² includes other misc. courses - 2 (3.2%)

³ includes Parasit. - 1 (2.3%), misc. biomed. - 1 (2.3%)

⁴ includes Nutrition - 5 (4.2%), Int. Hlth. - 5 (4.2%), Soc. Behav. courses - 3 (2.5%)

⁵ includes Nutr. - 2 (2.5%), Fam. Hlth./Plan. - 7 (8.8%), Int. Hlth. - 3 (3.6%), Soc. behav. courses - 2 (2.5%), other misc. courses - 2 (2.5%)

Table 68. cont.

Area	F n = 16		G n = 12		H n = 16		I n = 13		J n = 18	
	no.	%	no.	%	no.	%	no.	%	no.	%
Admin/man	8	23.5	5	18.5	14	31.8	6	13.0	2	4.1
Epidemiology	6	17.6	2	7.4	4	9.1	7	15.2	15	30.6
Biostatistics	2	5.9	5	18.5	7	15.9	5	10.9	11	22.4
Env. Health	4	11.8			3	6.8	20	43.5		
Mental Health	3	8.8	2	7.4						
P. H. N.	1	2.9	2	7.4						
Educa/comm.	1	2.9			1	2.3				
Trop. Med.	2	5.9	2	7.4	1	2.3				
Micro.									7	14.3
Other specific ¹	4 ⁶	11.8	4 ⁷	14.8	2 ⁸	4.5			3 ⁹	6.1
Global	1	2.9	1	3.7	5	11.4	1	2.2	5	10.2
Stimulis			2	7.4	4	9.1	2	4.3	1	2.0
Teach/learn.					1	2.3	2	4.3	2	4.1
Practical							1	2.2	2	4.1
Interdisciplinary			1	3.7	2	4.5	2	4.3	1	2.0
Other	2	5.9	1	3.7						
Total citations	34	99.9	27	99.9	44	100.0	46	99.9	49	99.9
by % respondents		68.7		91.7		81.3		92.3		94.4

⁶ includes Nutr. - 1 (2.9%), MCH - 3 (8.8%)

⁷ includes MCH - 2 (7.4%), Soc. behavioral courses - 1 (3.7%), other misc. courses - 1 (3.7%)

⁸ includes Pop. Studies - 1 (2.3%), other misc. courses - 1 (2.3%)

⁹ includes Micro. - 2 (4.1%), Pop. Studies - 1 (2.0%)

Table 68. cont.

Area	K n = 16		L n = 18		M n = 10	
	no.	%	no.	%	no.	%
Admin/man.	4	8.3	12	17.6	5	10.9
Epidemiology	4	8.3	6	8.8	5	10.9
Biostatistics	3	6.2	6	8.8	3	10.9
Env. Health					7	15.2
Mental Health	2	4.2	11	16.2	3	6.5
P. H. N.	8	16.7	3	4.4		
Educa/comm.	10	20.8	2	2.9		
Trop. Med.	1	2.1			2	4.3
Micro.			2	2.9	4	8.7
Other Specific ¹	4 ¹⁰	8.3	12 ¹¹	17.6	5 ¹²	10.9
Global	3	6.2	2	2.9	2	4.3
Stimulis	2	4.2	4	5.9		
Teach/learn	2	4.2	2	2.9	3	6.5
Practical	4	8.3	5	7.4	4	8.7
Interdisciplinary			1	1.5		
Other	1	2.1			1	2.2
Total citations	48	99.9	68	99.8	46	100.0
by % respondents		87.5		88.9		100.0

¹⁰ includes Nutr. - 1 (2.1%), Parasit. - 1 (2.1%), Misc. biomed. - 1 (2.1%), other misc. courses - 1 (2.1%)

¹¹ includes Fam. hith. /plan. - 2 (2.9%), Int. hith. - 2 (2.9%), Parasit. - 3 (4.4%), MCH - 2 (2.9%)

¹² includes Parasit. - 3 (6.5%)

Table 69. Summary of Valuable Learning Experiences in Core Areas, Non-Core Areas and General by Job Group

Area	A	B	C	D	E	F	G	H	I	J	K	L	M
Core Ad/m.	*** ³	**	** ²	* ¹	***	**	*	***	*			*	*
Epid.		*	*	*		*			*	***			*
Bios.				*	*		*	*	*	**			*
EH	*					*			***				**
Non-core	*	**	**	**		***	***			**	***	***	***
General	*	***	**	**	**		*	**	*	**	**	**	**
No. of citations	63	44	119	80	56	34	27	44	46	49	48	68	46

¹ includes 10.0-19.9% of total citations

² includes 20.0-29.9% of total citations

³ includes $\geq 30.0\%$ of total citations

Table 70. Breakdown of Citations of Valuable Learning Experiences
in the Administration/Management Area for Job Groups
A - E + H Combined

Admin/man area	No. of citations
<u>General</u>	<u>44</u>
public, public health admin.	25
health services admin.	9
med. care admin.	6
other	4
<u>Planning courses</u>	<u>11</u>
<u>Field experience</u>	<u>13</u>
<u>Other</u>	<u>44</u>
business school related ¹	21
other	23
Total citations	112

¹e.g., financial management accounting, O-R, systems theory, general

TABLE 71. Experiences Desired in Retrospect -
Specific Areas (273 Citations)¹

Area	No. of citations
<u>Administration/management</u>	<u>123</u>
General	46
health services administration	14
public health administration	9
medical care administration	6
hospital administration	6
administration, unspecified	8
health manpower development	3
Medical care	24
comprehensive, integrated, pre-paid	4
gerontology	2
special (emergency, home)	2
interdisciplinary approach to	3
use of paraprofessionals in	2
assessment of needs	1
community health programs-	7
field exp., planning	
visits to facilities, contact with	2
practicing MD's	
medical care legislation	1
Management	24
modern management, business techniques	15
personnel management	9
Finances	22
budgeting, cost analysis	12
health financing e.g.	9
3rd party payments	
Health service systems	3
of other countries e.g. socialized	2
administration for developing	1
countries	
Law, public health, hospital	4

¹ excludes 4 citations: inappropriate, insufficient information

TABLE 71. (con't) - Experiences Desired in Retrospect -
Specific Areas (27 Citations)

Area	No. of citations
<u>Environmental health</u>	<u>47</u>
General	13
occupational, industrial inc. OSHA	18
toxicology	4
air	4
radiological	3
water	3
other (admin. of E.H. prog., lab work)	2
<u>Biostatistics</u>	<u>24</u>
General	7
computers, programming	8
data management, analysis	4
knowing, using sources of data	3
survey methods	2
<u>Education/communications</u>	<u>19</u>
principles of education, health education methods	14
communications, mass media use for paraprofessionals	4 1
<u>Epidemiology</u>	<u>15</u>
General	11
other (chronic, comm. dis., field, planning national service)	4
<u>Mental health</u>	<u>15</u>
General	2
group process, group dynamics	11
other (field work, therapy)	2
<u>Public health nursing</u>	<u>7</u>
General	1
community nursing	3
other (supervised field practice, field obs., more teaching practice)	3
<u>Maternal child health</u>	<u>6</u>
<u>Nutrition</u>	<u>6</u>

TABLE 71. (con't) - Experiences Desired in Retrospect -
Specific Areas (27 Citations)

Area	No. of citations
<u>Tropical Medicine</u>	<u>5</u>
<u>Microbiology</u>	<u>3</u>
<u>Parasitology</u>	<u>2</u>
<u>International law</u>	<u>1</u>
<u>Family planning</u>	<u>1</u>

TABLE 72. Qualities of Desired Learning Experiences by
Core Area and for All Areas

Desired Quality	No. of Citations					
	Core Areas				All areas %	
	Admin. / man.	E.H.	Epid.	Bios.		
More applied, more practical, more field experience	13	8	6	3	43	44.3
More advanced, more specialized learning	2	6	2	1	19	19.6
More experience in planning and development	13	3	0	0	17	17.5
More current, updated material	5	1	0	0	7	7.2
More learning how to evaluate	3	0	0	1	4	4.1
Other (e.g. systems, O-R approach)	3	1	0	0	7	7.2
Total	39	19	8	5	97	99.9

TABLE 73. Experiences Desired in Retrospect -
General (103 Citations)

Area	No. of citations
<u>Methodologies</u>	<u>18</u>
evaluation, research methodology	9
systematic approach to problem solving	5
team approach to problem solving	4
<u>Implementing change in community</u>	<u>17</u>
political science, legislative process	11
community organization	6
<u>Grant, contract proposals</u>	<u>14</u>
<u>More independent activities</u>	<u>12</u>
field experience in agencies	8
individual projects	2
workshop, seminar courses	2
<u>Basic: human health, disease, ecology</u>	<u>12</u>
ecology	5
cultural, social factors in disease and illness	4
disease process, medical termin- ology	3
<u>Special biomedical courses</u>	<u>4</u>
pharmacology	2
other (ophthalmology, physical assessment)	2
<u>More personal interaction</u>	<u>6</u>
among students	3
with faculty	3
<u>Miscellaneous</u>	<u>10</u>
practical methods of disease preven- tion and control	3
practice in writing scientific papers	3
other (short courses at night in Hawthorne Hall, language lab, urban planning, Black history)	4

TABLE 74. Distribution of Citations of Experiences Desired in Retrospect for All Respondents and Four Job Categories

Desired Experience	All		Job Category							
			Admin. /man		Acad/teach		Consult.		Practitioners	
	no. ¹	%	no.	%	no.	%	no.	%	no.	%
Admin. /man.	122	32.4	76	37.1	6	12.8	11	47.8	26	28.6
Env. Health	47	12.5	20	9.8			4	17.4	23	25.3
Biostatistics	24	6.4	6	2.9	8	17.0	2	8.7	7	7.7
Educa. /com- munications	19	5.1	6	2.9	8	17.0			4	4.4
Epidemiology	15	4.0	7	3.4	3	6.4			3	3.3
Mental Hlth.	15	4.0	9	4.4	2	4.2	1	4.3	3	3.3
Other specific areas ²	31	8.2	16	7.8	8 ³	17.0	1 ⁴	4.3	4	4.4
Methods	18	4.8	11	5.4	4	8.5	1	4.3	2	2.2
Impl. Change	17	4.5	13	6.3					4	4.4
Grants/Pro- posals	14	3.7	10	4.9	1	2.1	2	8.7	1	1.1
Independent Activities	12	3.2	5	2.4	3	6.4	1	4.3	3	3.3
Basic health/ disease/ecol.	12	3.2	6	2.9					4	4.4
Special Biomed.	4	1.1	3	1.5	1	2.1				
Pers. Interact.	6	1.6	4	2.0	2	4.3				
Miscellaneous	10	2.6	7	3.4					5	5.5
None	10	2.6	6	2.9	1	2.1			2	2.2
Total	376 ⁵	99.9	205	100.0	47	99.9	23	99.8	91	100.1

¹ no. - number of citations

² includes: PHN, MCH, Nutr., T.M., Micro., Parasit., Int. Hlth. and Fam. Pl. with the exceptions noted below, no one area received $\geq 2\%$ of the total citations

³ includes PHN-3(6.4%), MCH-1(2.1%), Nutr.-2(4.3%), TM-1(2.1%) and Parasit.-1(2.1%)

⁴ TM-1(4.3%)

⁵ excludes 4 citations: inappropriate, insufficient information

TABLE 75. Least Useful Learning Experiences -
Specific Areas and General Comments

Specific Areas	No. of Citations
Administration/management	58
Public/public health admin.	33
Other specified admin. /man. (HSA, MCA, HA, HMD)	9
Administration, unspecified	4
Business school courses	3
Planning courses	3
Other (problem courses, seminar, etc.)	6
Biostatistics	44
Environmental Health	28
unspecified	13
sanitation	6
other (air, water, occupational etc.)	9
Epidemiology	15
Public Health Nursing	10
unspecified	4
field work	4
other (research, leadership course)	2
Maternal Child Health	8
International Health	8
Population Studies	6
Family Health, Family Planning	5
Nutrition	5
Parasitology	4
Education/communications	4
Tropical Medicine	3

¹ 177 respondents gave a total of 271 citations

TABLE 75. (con't)

140

Specific Areas	No. of Citations
Mental Health	2
Microbiology	2
Thesis, dissertation	5
Core courses unspecified	5
Misc. biomed. courses	4
Misc. behavioral courses	3
Total	219
<u>General Comments</u>	
None, nothing; everything of some use	37
Everything, nothing useful to date	4
Upgrade courses	3
Less theoretical, more real	2
Other; insufficient info.	4
Total	50

11/6/75

TABLE 76. Comments on Least Useful Learning Experiences by Core and Non-Core Areas

Area	No. of citations	Comment		Type of Comment				
				Not needed to date	Excess depth, detail	Unsatisfactory	Specific Instructional criticism	Other
<u>Core</u>	150	96	54 (100.0)	8 (14.8) ¹	12 (22.2)	16 (29.6)	11 (20.4)	7 (13.0)
Admin. /man.	58	38	20 (100.0)	2 (10.0)	1 (5.0)	7 (35.0)	6 (30.0)	4 (20.0)
Biostatistics	44	25	19 (100.0)	4 (21.1)	10 (52.6)	2 (10.5)	2 (10.5)	1 (5.3)
E.H.	28	17	11 (100.0)	1 (9.1)	.	7 (63.6)	2 (18.2)	1 (9.1)
Epidemiology	15	12	3	1	1		1	
Core courses Unspecified	5	4	1					1
<u>Non-core</u>	69	45	24 (100.0)	6 (25.0)	5 (20.8)	2 (8.3)	4 (16.7)	7 (29.2) ²
<u>TOTAL</u>	219	141	78 (99.9)	14 (17.9)	17 (21.8)	18 (23.1)	15 (19.2)	14 (17.9)

¹ percent of citations with comments² 5 of 7 'other' comments were "already had knowledge"

TABLE 77. Distribution of Citations of Specific Least Useful Learning Experiences by Core and Non-Core Areas for All Respondents and by Job Category

Job Category	No. of Citations			Distribution of Core Area Citations				
	Total	Core areas	Non-core areas	Admin/man	Bios.	E.H.	Epid.	Unspecified
Admin/man. n=119	130 (100.0)	93 (71.5)	37 (28.5)	36 (38.7) ²	29 (31.2)	11 (11.8)	12 (12.9)	5 (5.4)
Acad/teach. n= 38	18 (100.0)	11 (61.1)	7 (38.9)	7 (63.3)	2 (18.2)	1 (9.1)	1 (9.1)	
Consultant n= 15	16 (100.0)	10 (62.5)	6 (37.5)	1 (10.0)	1 (10.0)	8 (80.0)		
Practitioner n= 52	52 (100.0)	33 (63.5)	19 (36.5)	12 (36.4)	12 (36.4)	7 (21.2)	2 (6.1)	
All respondents n=229	219 ¹ (100.0)	150 ¹ (68.5)	69 (31.5)	58 (38.7)	44 (29.3)	28 (18.7)	15 (10.0)	5 (3.3)

¹ includes 3 citations by respondents not included in the 4 Job Categories:
2 citations - Admin/man; 1 citation - E.H.

² total number of core area citations = 100%

TABLE 78. Suggestions for Improvement-Specific
(122 Citations)

Administration/management - 39 suggestions

- 6 - upgrade, improve
- 5 - update; more emphasis on modern management
- 3 - more practical applied
- 3 - include current and future developments in health legislation eg.
PSRO, peer review
- 2 - adjust admin. courses to student need
- 2 - admin./management is basically common sense which can't be taught
- 1 - modify admin. to better rounded, less stereotyped program
- 1 - more flexibility in p.h. problems course
- 1 - management - concentrate on a few indepth programs
- 1 - include realistic look at health systems in neighboring states as well
as La.
- 1 - include proposal writing in planning courses
- 1 - include latest developments for management of patients with specific
diseases
- 1 - de-emphasize consumerism
- 1 - don't require admin.
- 1 - reduce duplication among admin. programs

More emphasis on:

- 2 - planning courses
- 1 - public health law
- 1 - health status indicators
- 1 - assessment of community health needs
- 1 - comparative, model health systems
- 1 - community health
- 1 - evaluation of health care
- 1 - family health

Environmental health - 25 suggestions

- 4 - more applied, more practical
- 3 - recent changes in E.H. program sound good
- 2 - broaden out occupational health to allow for more specialization
- 2 - keep current up to date
- 1 - add a toxicology course
- 1 - expand coverage of EPA legislation
- 1 - expand courses in radiological health
- 1 - expand urban planning, urban ecology
- 1 - broaden E.H. program to allow for more specialization
- 1 - desirable jobs for master's grad. in E.H. very scarce
- 1 - transfer E.H. program to School of Engineering
- 1 - courses good but upgrade quality of instruction

TABLE 78. (con't)

Environmental health con't.More emphasis on:

- 3 - occupational health
- 2 - E.H. in general
- 1 - environmental controls

Biostatistics - 13 suggestions

- 7 - adjust to student need, background
- 2 - more applied, practical

More emphasis on:

- 1 - survey methods
- 1 - data sources, collection, analysis, indicators of health
- 1 - give more than 2 credit hours for basic course
- 1 - cookbook approach to use of statistical formulas

Epidemiology - 6 suggestions

- 1 - improve, upgrade
- 1 - more applied, practical
- 1 - give more than 2 credit hours for basic course (then 4 hrs/wk, 1 semester)
- 1 - keep team approach
- 1 - keep current, up to date
- 1 - more emphasis on epid.

Public Health Nursing - 8 suggestions

- 2 - more emphasis on physical assessment
- 2 - improve supervision for field practice
- 1 - more emphasis on field experience
- 1 - improve, upgrade program
- 1 - offer a doctoral program
- 1 - remove prog. from admin. to allow for creative expansion

Education/communications - 6 suggestions

- 2 - more emphasis; offer program in health education
- 2 - recent faculty changes in education, communications should resolve past problems
- 1 - improve, upgrade program
- 1 - more emphasis on practice teaching

Tropical Medicine - 5 suggestions

- 1 - improve, upgrade program
- 1 - more emphasis on T.M.
- 1 - more practical, applied
- 1 - offer field experience in preventive, control of disease in endemic areas
- 1 - allow non-M.D.'s to take T.M. courses

Nutrition - 5 suggestions

- 1 - improve, upgrade program
- 1 - keep current, up to date
- 1 - more emphasis on nutrition
- 1 - offer more advanced specialized courses

TABLE 78. (con't.)

Behavioral courses - 3 suggestions

- 3 - more emphasis on behavioral courses

Microbiology - 2 suggestions

- 1 - more applied, job oriented
- 1 - allow job oriented specialization eg. med. micro., admin. of micro. lab.

Biomedical courses - 2 suggestions

- 1 - less emphasis on basic physiology and bodily functions
- 1 - offer an overview of medical vocabulary, diagnostic procedures, etc.

MCH - 1 suggestion

- 1 - offer special nutrition courses

International Health - 1 suggestion

- 1 - more emphasis on international health

Parasitology - 1 suggestion

- 1 - less morphology, more physiology

Thesis - 3 suggestions

- 2 - require thesis
- 1 - adjust thesis requirement to student background

Core courses - 2 suggestions

- 1 - core courses for MPH - excellent
- 1 - adjust to student need

TABLE 79. Distribution of Specific Suggestions for all Respondents and by Job Category

Job Category	Total No. Suggestions	Core Area					Non- core
		Admin/man.	E.H.	Bios.	Epid.	Behav.	
Admin/man n=119	55 (99.9)	23 (41.8) ¹	6 (10.9)	6 (10.9)	2 (3.6)	2 (3.6)	16 (29.1)
Acad/teach n= 38	13 (100.0)	1 (7.7)		2 (15.4)	1 (7.7)		9 (69.2)
Consultant n= 15	7 (100.0)	4 (57.1)	2 (28.6)			1 (14.3)	0 (0.0)
Practitioner n= 52	45 (99.9)	11 (24.4)	16 (35.5)	5 (11.1)	3 (6.7)		10 (22.2)
Other n= 5	2		1				1
Total n=229	122 (100.1)	39 (32.0)	25 (20.5)	13 (10.7)	6 (4.9)	3 (2.5)	36 (29.5)

¹ percent of total suggestions

TABLE 80. Suggestions for Improvement-General
(263 Citations)

<u>More real, practical learning</u>	<u>66</u>
more field experience, practical experience in community programs	28
less theoretical, more related to job needs, real world	15
more instructors with real experience	13.
more practical problem solving exercises	8
more involvement in faculty research	2
<u>Upgrade teaching/learning process</u>	<u>46</u>
evaluate, upgrade instructors; require formal teaching courses for instructors	17
courses not graduate level, not sufficiently demanding	7
upgrade programs by lengthening, including field experience	7
upgrade courses by more use of scholars and leaders eg. through better use of instructional media,	5
don't admit, carry substandard students; dismiss cheaters, re-instate honor system	6
create atmosphere of pride in learning	2
improve evaluation of student learning	2
<u>Teaching approach</u>	<u>42</u>
more student involvement, participation, contribution to teaching, curriculum design	8
more concern with current problems	7
emphasize interdisciplinary, team approach to health problems	7
more small group, individual projects	7
adjust teaching to student background	6
instructors aloof, biased toward certain groups of students	5
other (eliminate duplication in courses, keep teaching conceptual)	2

TABLE 80.(con't.)

<u>More flexibility, freedom of choice</u>		<u>33</u>
fewer required courses, more electives	16	
more freedom of choice for mid-career students	9	
encourage cross-registration in other schools in University; have bulletins available	4	
other (allow more specialization, combined major programs)	4	
<u>More emphasis on</u>		<u>23</u>
funding sources, preparing budgets, grant proposal writing	6	
practical business sense of p.h. operations	5	
role of government, legislative process in p.h.	4	
O-R, systems analysis	2	
research methodology, utilization research	2	
personnel management	2	
other (health care systems in other countries, human relations)	2	
<u>Special from international students</u>		<u>9</u>
more international, less local orientation in teaching	7	
other (clear diction, sensitivity to different patterns of expression and thought)	2	
<u>Miscellaneous</u>		<u>44</u>
generally pleased, satisfied with program	9	
no suggestions	6	
promote interaction among students, students and faculty	6	
improve faculty advising of students	3	
need prominent Dean (2) with more autonomy from Brd. of Administrators (1)	3	
SPHTM should be more involved with community and provide leadership	2	
other (e.g. keep broad general core, devise strong core for each program, start Ph.D. programs, more preparation for coping with resistance to change)	15	

TABLE 81. Distribution of General Suggestions for All Respondents
and by Job Category

Comment/ suggestion	Job Category					Total n=229
	Admin/man n=119	Acad/teach n=38	Consultant n=15	Practitioner n=52	Other n=5	
more real, practical learning	36 (23.2) ¹	14 (31.8)	4 (22.2)	9 (25.0)	3 (30.0)	66 (25.1)
upgrade teaching/ learning	28 (18.1)	9 (20.5)	3 (16.7)	4 (11.1)	2 (20.0)	46 (17.5)
teaching approach	25 (16.1)	4 (9.1)	6 (33.3)	5 (13.9)	2 (20.0)	42 (16.0)
more flex- ibility	20 (12.9)	6 (13.6)		7 (19.4)		33 (12.5)
more em- phasis	18 (11.6)		2 (11.1)	2 (5.5)	1 (10.0)	23 (8.7)
international students	6 (3.9)	1 (2.3)	1 (5.5)	1 (2.8)		9 (3.4)
miscellaneous	22 (14.2)	10 (22.7)	2 (11.1)	8 (22.2)	2 (20.0)	44 (16.7)
Total	155 (100.0)	44 (100.0)	18 (99.9)	36 (99.9)	10 (100.0)	263 (99.9)

¹ percent total comments in Job Category

APPENDIX A

COC Alumni Questionnaire and Cover Letters

APPENDIX A

TULANE UNIVERSITY

School of Public Health and Tropical Medicine

1430 Tulane Avenue, New Orleans, La. 70112 U.S.A.

October 1, 1974

Reference No. _____

Dear

I am writing as chairperson of the Committee on Core Objectives. This Committee was charged by Dr. John Walsh, as Acting-Dean of the School of Public Health and Tropical Medicine, with the responsibility of making recommendations concerning the core curriculum for Master's level students in the SPHTM.

The Committee agreed that our alumni were best able to tell us in what ways their educational experiences at the SPHTM were useful to them as preparation for their present jobs. They could also tell us what activities they had found most important in fulfilling the demands of their jobs. Having this information would be an invaluable aid in planning a curriculum which would prepare our incoming students to meet the challenges they would face as Public Health Professionals after leaving the SPHTM.

The enclosed questionnaire is a lengthy one and in completing it, we are asking for a major donation of your time. The responses of those of you who have only recently entered the field of health are equally important to us as the responses of those, such as physicians, who attended the SPHTM in mid-career. I hope you will consider your donation of time as an investment whose dividends will be the increased effectiveness of our teaching programs in the SPHTM.

If, for any reason, you would prefer not to complete the questionnaire, please fill out just the first two pages through Item 13 and return them to us.

Your response by November 1, would be greatly appreciated.

Sincerely yours,

D.I. Clemmer, Ph.D.

for the

Core Objectives Committee

DIC:lt

DEPARTMENT OF HEALTH MEASUREMENT SCIENCES Biostatistics Epidemiology/Population Studies

152
APPENDIX A

TULANE UNIVERSITY
School of Public Health and Tropical Medicine
1430 Tulane Avenue, New Orleans, La. 70112 U.S.A.

November 18, 1974

Reference No. _____

In mid-October, we mailed you a questionnaire titled "Alumni Survey, Tulane School of Public Health and Tropical Medicine."

We want to let you know that we would still very much appreciate receiving your response.

Again, if for any reason, you'd rather not complete the entire questionnaire, please fill out just the first two pages through Item 13 and return them to us in the self-addressed envelope.

We're hoping to publish a summary of survey results in the Spring 1975 issue of Tulane Medicine.

Thank you.

Sincerely yours,

D.I. Clemmer, Ph.D.
for the
Core Objectives Committee

153
APPENDIX A

TULANE UNIVERSITY
School of Public Health and Tropical Medicine
1430 Tulane Avenue, New Orleans, La. 70112 U.S.A.

January 23, 1975

Reference No. _____

In October 1974, we mailed the C.O.C. Alumni Survey questionnaire to 437 alumni of the Tulane School of Public Health and Tropical Medicine. This group comprised all graduates for the five-year period, 1969-1973. Our respondents (217 of them to date) have contributed valuable information which will help us to fulfill our primary objective, the improvement of the educational experience for students in the SPHTM.

The Alumni Survey has meanwhile assumed an additional importance. The faculty and students of the SPHTM have just embarked on an extensive self-study which will form the basis for our re-accreditation by the Council of Education in Public Health. The Alumni Survey results will provide an important and unique additional dimension to this self-study.

While we are encouraged by the response rate of approximately 50%, we are concerned, as you might guess, that the Alumni Survey data be as representative as possible. For this reason we are mailing the questionnaire once more to those of you who have not yet responded.

Again, if for any reason you prefer not to complete the entire questionnaire, we would greatly appreciate your completing just Items 1-13 (the first two pages) and returning the questionnaire to us at your earliest convenience.

Best wishes for 1975.

Sincerely yours,

D.I. Clemmer, Ph.D.
for the
Core Objectives Committee

9/23/74

Ms.	
Mr.	
Dr.	

1. Name Dr. 2. I.D. No.

Street

City

Country

4. Sex: male ☐ female ☐ 5. Year of birth

6. Citizenship when you last attended the SPHTM

7. Basic professional discipline, if any, at the time of last entry into the SPHTM (e.g., physician, social worker, psychologist) If "none" or "student," please specify.

8. Present area of occupational specialization (e.g., med. care administration, health services planning, epidemiology, occupational health)

9. Academic Degrees

List all earned academic degrees (e.g., B.S., M.P.H.) beginning with baccalaureate degree and including SPHTM degree(s)

Degree	Institution	Major Field or Program	Year degree granted

10. Employment (if "none," "student" or "retired," please specify)

a. Last health related job held prior to most recent entry into a SPHTM degree program.

Complete Official Job Title	Organization		Year	
	Name	Country	began	ended

b. Job (health or non-health) immediately after last graduation from SPHTM

Complete Official Job Title	Organization		Year	
	Name	Country	began	ended

I.D. No. _____

11. Most of the remaining questions in this questionnaire relate to "your job."
- If you have never been employed since graduation, please "X" the box below, specify if "student" or "retired" (either temporary or permanent) and return the questionnaire.
 - not employed since graduation ☐ specify _____
 - If you hold more than one job at present (e.g., private practice of psychiatry and Director, Community Mental Health Clinic), please choose the job that you regard as your principle or primary job.
 - If you are not employed at present, please choose your most recent principle job since graduation from the SPHTM.

Please indicate the category of "your job." The job you indicate will be the focus of the remainder of the questionnaire.

- principle present job ☐
 - most recent principle job (postgraduation) ☐
12. We would like some additional information about the job "X'ed" in Item 11 above
- Organization (e.g., New Orleans Health Department)

 - Organizational subunit, if any (e.g., Div. of Comm. Diseases)

 - Complete official job title (e.g., Director of the Div. of Comm. Diseases)

 - Country in which you work _____
 - Dates of employment: Year began Year ended (or "present")

13. In attaining my job (Item 12), my degree(s) from the SPHTM was/were
- a prerequisite ☐
 - an important qualification ☐
 - a helpful qualification ☐
 - not important ☐

We would like first to ask about the major functions you perform in this job and later, in Item 15, about specific activities you carry out as part of your job.

14. We have listed below a number of functions which might be performed by Health Professionals in their jobs. To help us better understand the nature of the work involved in your job (Item 12)

- a. please look over the list and place an "X" in the box beside the major functions you perform
- b. if we've left out any functions which you regard as important in your job, please add them under "Other."
- c. now, please go back over the list and roughly estimate how much of your working time over the period of a year is devoted to each function you "X'ed"
- d. then in the 3rd column, please rate each function you have "X'ed" as to how important you feel they are in helping your organization achieve its goals. Use the scale

1	2	3	4	5
function(s)		function(s)		function(s)
of <u>lesser</u>		<u>moderately</u>		<u>very</u>
importance		important		important
to organization		to organization		to organization

- e. these functions may have a somewhat different order of importance to you in terms of personal satisfaction. Please go back over the list once more and rate each function which you have "X'ed" for personal satisfaction using the scale

1	2	3	4	5
function(s)		function(s)		function(s)
providing		providing		providing
<u>least</u> personal		<u>moderate</u> personal		<u>most</u> personal
satisfaction		satisfaction		satisfaction

I.D. No. _ _ _

14. (Continued)

	1	2	3	4	
Major functions you perform as part of job "X'ed" in Item 12	Function performed "X"	Estimate % time	Importance 1-lesser ↓ 5-very	Satisfaction 1-least ↓ 5-most	1 2 3 4
a. direct provision of personal services (e.g., medical, nursing, laboratory)					5 6 7 8 9 10
b. research - collecting and/or analyzing data to yield new facts					11 12 13 14 15 16
c. administration and/or management - planning, organizing, directing, controlling, staffing					17 18 19 20 21 22
d. program evaluation					23 24 25 26 27 28
e. supervision (including training) of staff					29 30 31 32 33 34
f. formal teaching, classroom and/or field					35 36 37 38 39 40
g. liaison work - formal (e.g., committees, speaking before consumer or professional groups) or informal (personal contacts, lobbying)					41 42 43 44 45 46
h. consultation - providing information or technical assistance to help others solve problems; formal or informal					47 48 49 50 51 52
i. other (specify) _____					53 54 55 56 57 58
j. other (specify) _____					59 60 61 62 63 64 65 66 67 68 69 70 71 72 73
		100%			

170

-4-

Do your percentages total 100%?

15. As part of each of the major functions listed in Item 14, you carry out many specific activities. We have listed below examples of such activities in two sections:

Section a. Activities related to management/administration

Section b. General activities related to public health

We would like you to rate each activity as to its importance in meeting the demands of your job (Item 12). Note that some activities may be of little practical importance to you because they are not related to your particular professional position (Item 12).

At the end of each section, we have left space for you to add any other activities of importance to you in carrying out your job.

Please indicate your "importance" rating by circling one number on the scale.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

a. Activities Related to Management/Administration

1. Assessing community health needs.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

2. Assessing the effectiveness of existing health services in meeting community health needs.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

3. Designing or planning programs to meet community health needs.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

4. Identifying, mobilizing and coordinating community resources in meeting community health needs.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

5. Being aware of cultural differences in working with consumer or patient populations.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

6. Planning and implementing community educational programs.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	lesser		moderate		great

1 2 3

3
4

5

6

7

8

9

10

7. Utilizing paraprofessionals and/or volunteers as part of the health team.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	11

8. Being aware of the attitudes of other Health Professionals (e.g., private section) in the community towards community health programs.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	12

9. Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	13

10. Using available resources to influence legislative decisions.

Importance - your job	1	2		4	5	
	lesser		moderate		great	14

11. Introducing changes into the provision of health care.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	15

12. Establishing program goals.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	16

13. Evaluating progress toward goals.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	17

14. Establishing feedback mechanisms for quality control and as indicators for needed change.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	18

15. Developing budgets for your program.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	19

16. Identifying sources of funding; seeking funding.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	20

17. Preparing research or contract proposals.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	21

18. Using cost-benefit and cost-effectiveness analysis.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	22

19. Using cost control data for the day to day management of your program.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	23

20. Establishing priorities for resource allocation.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	24

21. Establishing formal and informal organizational structures to carry out functions.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	25

22. Using the interdisciplinary health team approach to the solution of health problems.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	26

23. Developing and implementing administrative and personnel policies.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	27

24. Collaborating with personnel in developing policies and procedures.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	28

25. Specifying expectations, rewards, sanctions in dealing with personnel.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	29

26. Understanding the relationship of fulfilling basic human needs (e.g., recognition, rewards) to job productivity.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	30

27. **Assisting personnel with adaptation to change.**

Importance - your job	1	2	3	4	5
	lesser		moderate		great

31

28. Conducting inservice educational and/or training programs.

Importance - your job	1	2	3	4	5
	lesser		moderate		great

32

29. Recognizing and resolving potential and real interpersonal conflict.

Importance - your job	1	2	3	4	5
	lesser		moderate		great

43

What additional activities related to Management/Administration are important to you in carrying out your job?

30. _____

34 35

Importance - your job	<u>1</u>	<u>2</u>		<u>4</u>	<u>5</u>
	lesser		order		great

36

31. _____

३७ ३८

Importance - your job	1	2	3	4	5
	lesser		moderate		great

39

32. _____

40 41

Importance - your job	1	2	3	4	5
	lesser		moderate		great

42

b. General Activities Related to Public Health

1. Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.

Importance - your job	1	2	3	4	5
	lesser		moderate		great

43

2. Understanding existing and proposed legislation and its impact on health.

Importance - your job	1	2	3	4	5
	lesser		moderate		great

44

3. Understanding how medical care is financed.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>45</u>

4. Understanding the differences and similarities of health problems in developed and developing countries.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>46</u>

5. Understanding concepts of planning for health services.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>47</u>

6. Understanding problems related to the distribution of health manpower as they affect the solution of health problems.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>48</u>

7. Using epidemiologic methods for the study of community health problems.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>49</u>

8. Collecting, analyzing, interpreting and reporting health related information.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>50</u>

9. Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>51</u>

10. Understanding the use of computers for data storage, retrieval and analysis.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>52</u>

11. Identifying environmental hazards to human health.

Importance - your job	1	2	3	4	5	
	lesser		moderate		great	<u>53</u>

12. Defining and applying various indices for measuring the level of well being and illness in the community.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	54

13. Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	55

14. Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	56

15. Interpreting rates, means, medians, standard deviations and tests of statistical significance.

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	57

Please list any additional activities that are important to you in carrying out your job.

16. _____

58 59

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	60

17. _____

61 62

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	63

18. _____

64 65

Importance - your job	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	lesser		moderate		great	66

67 68 69

70 71 72

73 74 75

I.D. No.

16. Changes in society such as new legislation, new technology and changing public attitudes place new demands on health workers. As a result of such changes, can you foresee any new activities which will become increasingly important in the near future for persons in jobs like yours?

1 2 3

4
4

a. _____

5 6 7

b. _____

8 9 10

c. _____

11 12 13

d. _____

14 15 16

Finally we would like to shift focus once more, this time to your educational experience in the SPHTM. Your responses here, both negative and positive, will be of particular value in helping us identify ways in which we can strengthen our curriculum.

17. Some of our graduates now hold jobs of a type which they hadn't anticipated when they selected their Program or major field of study at the SPHTM. Would you say that your SPHTM Program (Item 9) was intended as preparation for your job (Item 12)?

Yes ☐ No ☐ Not exactly ☐

17

18. If you answered "no" or "not exactly," please explain.

18

19. How would you rate your SPHTM Program (Item 9) in preparing you to meet the demands of your job (Item 12)?

My Program provided (circle one)

1	2	3	4	5
little		some		much
knowledge		useful		essential
of value		knowledge		knowledge

19

I.D. No. _____

20. What specific learning experiences did you have while in the SPHTM which have proved to be of particular value to you in meeting the demands of your job (Item 12)?

- a. _____ 20 21 22

- b. _____ 23 24 25

- c. _____ 26 27 28

- d. _____ 29 30 31

- e. _____ 32 33 34

21. In retrospect, what learning experiences in the SPHTM would have been particularly useful in preparing you for your job (Item 12) if they had been available or if you had participated in them?

- a. _____ 35 36 37

- b. _____ 38 39 40

- c. _____ 41 42 43

- d. _____ 44 45 46

I. D. No. _____

22. What learning experiences in the SPHTM in which you invested considerable time and effort have proved to be of little relevance or usefulness thus far in your career as a Health Professional?

- a. _____ 47 48 49

b. _____ 50 51 52

c. _____ 53 54 55

23. Do you have any special comments or suggestions as to how we can improve the educational experiences at the SPHTM?

- _____
56 57 58

59 60 61

62 63 64

65 66 67

68 69 70

24. I first learned about the SPHTM from

a. printed materials (catalogues, brochures) sent out by the SPHTM ☐

b. an advertisement in a professional publication ☐

c. a person ☐

1) If a person, what was the relationship of this person to you (e.g., colleague, teacher, employer)? _____

2) What was the relationship of this person to the SPHTM (former student, faculty member, none)? _____

d. other (specify) _____ ☐

71
72
73
74
75 76 77

We hope to publish a summary of the results of this survey in Tulane Medicine. Please watch for it there.

Thank you for your cooperation.

78 79 80

APPENDIX B

TABLE 82. Source of First Information about the SPHTM for 216 Respondents

Source	No. of citations	%
<u>a person - relationship to SPHTM/TMC</u>	<u>144</u>	<u>62.6</u>
alumnus, student	65	28.3
faculty ¹	41	17.8
none	29	12.6
no data	9	3.9
<u>SPHTM catalogues, brochures</u>	<u>36</u>	<u>15.7</u>
<u>lived, worked, student in N.O.</u>	<u>13</u>	<u>5.7</u>
<u>by reputation</u>	<u>6</u>	<u>2.6</u>
<u>through organization requiring p.h. degree (military, certifying)</u>	<u>8</u>	<u>3.5</u>
<u>WHO, AID</u>	<u>8</u>	<u>3.5</u>
<u>advertisement in professional journal</u>	<u>7</u>	<u>3.0</u>
<u>other (personal inquiry, SPH listings etc)</u>	<u>8</u>	<u>3.5</u>
Total	230	100.1

¹ includes 3 friends of faculty and 2 faculty of other SPH's.

NOTE: 216 respondents cited a total of 230 sources.

APPENDIX C

Activities Scored High and Low by Job Group

Table 83. Job Group A. (administrator/managers of patient facilities having no explicit community orientation) n = 20

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	85.0
a24	Collaborating with personnel in developing policies and procedures.	85.0
a13	Evaluating progress toward goals.	80.0
a23	Developing and implementing administrative and personnel policies.	80.0
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	80.0
a29	Recognizing and resolving potential and real inter-personal conflict.	80.0
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	75.0
a12	Establishing program goals.	70.0
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	70.0
a21	Establishing formal and informal organizational structures to carry out functions.	70.0
a27	Assisting personnel with adaptation to change.	65.0
a22	Using the interdisciplinary health team approach to the solution of health problems.	60.0
a15	Developing budgets for your program.	55.0
a20	Establishing priorities for resource allocation.	55.0
b 3	Understanding how medical care is financed.	55.0
b 5	Understanding concepts of planning for health services.	55.0
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	50.0

Table 84. Job Group A. (administrator/managers of patient facilities having no explicit community orientation) n = 20

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scored '1 - 2'
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	80.0
a 6	Planning and implementing community educational programs.	75.0
b 8	Collecting, analyzing, interpreting and reporting health related information.	70.0
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	70.0
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	70.0
a17	Preparing research or contract proposals.	65.0
b 7	Using epidemiologic methods for the study of community health problems.	65.0
b11	Identifying environmental hazards to human health.	65.0
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	60.0
b10	Understanding the use of computers for data storage, retrieval and analysis.	60.0
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	60.0
a19	Using cost control data for the day to day management of your program.	55.0
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	52.6
a10	Using available resources to influence legislative decisions.	50.0
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	50.0

Table 85. Job Group B. (administrator/managers of patient services without explicit community orientation) n = 13

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
b 2	Understanding existing and proposed legislation and its impact on health.	81.9
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	75.0
a23	Developing and implementing administrative and personnel policies.	75.0
a26	Understanding the relationship of fulfilling basic human needs (e.g., recognition, rewards) to job productivity.	75.0
a29	Recognizing and resolving potential and real inter-personal conflict.	75.0
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	72.8
a 1	Assessing community health needs.	66.7
a24	Collaborating with personnel in developing policies and procedures.	66.6
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	63.7
b11	Identifying environmental hazards to human health.	63.7
a13	Evaluating progress toward goals.	58.4
a 8	Being aware of the attitudes of other Health Professionals (e.g., private sector) in the community towards community health programs.	58.3
a12	Establishing program goals.	58.3
a22	Using the interdisciplinary health team approach to the solution of health problems.	58.3
a 5	Being aware of cultural differences in working with consumer or patient populations.	55.0

Table 85. cont. Activities Scored High ('4 - 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
b 5	Understanding concepts of planning for health services.	54.6
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	54.5
a 3	Designing or planning programs to meet community health needs.	50.0
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	50.0
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	50.0
a27	Assisting personnel with adaptation to change.	50.0

Table 86. Job Group B. (administrator/managers of patient services without explicit community orientation) n = 13

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	72.7
b10	Understanding the use of computers for data storage, retrieval and analysis.	72.7
a17	Preparing research or contract proposals.	66.7
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	63.6
a16	Identifying sources of funding; seeking funding.	58.4
a18	Using cost-benefit and cost-effectiveness analysis.	58.4
b 7	Using epidemiologic methods for the study of community health problems.	54.6
b 8	Collecting, analyzing, interpreting and reporting health related information.	54.6
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	54.6
a19	Using cost control data for the day to day management of your program.	50.0
a20	Establishing priorities for resource allocation.	50.0

Table 87. Job Group C. (administrator/managers and consultants for community oriented control or preventive programs) n=35

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	85.8
a 1	Assessing community health needs.	74.3
a 3	Designing or planning programs to meet community health needs.	71.5
b 7	Using epidemiologic methods for the study of community health problems.	68.6
b11	Identifying environmental hazards to human health.	68.5
a12	Establishing program goals.	65.8
b 2	Understanding existing and proposed legislation and its impact on health.	65.7
b 5	Understanding concepts of planning for health services.	65.7
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	65.7
b 8	Collecting, analyzing, interpreting and reporting health related information.	62.9
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	62.9
a15	Developing budgets for your program.	62.9
a22	Using the interdisciplinary health team approach to the solution of health problems.	62.9
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	62.8
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	62.8

Table 87. cont. Activities Scored High ('4- 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
a20	Establishing priorities for resource allocation.	60.0
a23	Developing and implementing administrative and personnel policies.	60.0
a24	Collaborating with personnel in developing policies and procedures.	60.0
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	60.0
a 8	Being aware of the attitudes of other Health Professionals (e. g., private sector) in the community towards community health programs.	57.2
a13	Evaluating progress toward goals.	57.1
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	57.1
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	57.1
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	54.3
b 3	Understanding how medical care is financed.	54.3
a21	Establishing formal and informal organization structures to carry out functions.	51.4
a29	Recognizing and resolving potential and real inter-personal conflict	51.4

Table 88. Job Group C. (administrator/managers and consultants
for community oriented control or preventive programs) n=35

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
none		

Table 89. Job Group D. (administrator/managers of patient services with explicit community orientation) n = 24

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
a13	Evaluating progress toward goals.	91.7
a12	Establishing program goals.	87.5
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	79.1
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	75.0
a 3	Designing or planning programs to meet community health needs.	75.0
a 5	Being aware of cultural differences in working with consumer or patient populations.	75.0
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	75.0
b 5	Understanding concepts of planning for health services.	75.0
a28	Conducting inservice educational and/or training programs.	70.9
a 7	Utilizing paraprofessionals and/or volunteers as part of of the health team.	70.8
a26	Understanding the relationship of fulfilling basic human needs (e.g., recognition, rewards) to job productivity.	70.8
a29	Recognizing and resolving potential and real interpersonal conflict.	70.8
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	70.8
a 1	Assessing community health needs.	66.7
a22	Using the interdisciplinary health team approach to the solution of health problems.	66.6

Table 89. cont., Activities Scored High ('4 - 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
a 8	Being aware of the attitudes of other Health Professionals (e. g., private sector) in the community towards community health programs.	62.5
a24	Collaborating with personnel in developing policies and procedures.	62.5
b -6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	62.5
a11	Introducing changes into the provision of health care.	58.4
a27	Assisting personnel with adaptation to change.	58.4
a23	Developing and implementing administrative and personnel policies.	58.3
b 8	Collecting, analyzing, interpreting and reporting health related information.	58.3
a15	Developing budgets for your program.	54.2
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	54.2
b 3	Understanding how medical care is financed.	54.2
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	54.2
a20	Establishing priorities for resource allocation.	50.0
a21	Establishing formal and informal organizational structures to carry out functions.	50.0
b 2	Understanding existing and proposed legislation and its impact on health.	50.0
b11	Identifying environmental hazards to human health.	50.0

Table 90. Job Group D. (administrator/managers of patient services
with explicit community orientation) n = 24

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a17	Preparing research or contract proposals.	58.3
a19	Using cost control data for the day to day management of your program.	58.3
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	58.3
a16	Identifying sources of funding; seeking funding.	54.2
b10	Understanding the use of computers for data storage, retrieval and analysis.	54.2
a18	Using cost-benefit and cost-effectiveness analysis.	50.0
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	50.0

Table 91. Job Group E. (planners for health services and health manpower) n = 16

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 -5'
a 8	Being aware of the attitudes of other Health Professionals (e. g., private sector) in the community towards community health programs.	87.6
b 3	Understanding how medical care is financed.	87.6
a 3	Designing or planning programs to meet community health needs.	87.5
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	87.5
a11	Introducing changes into the provision of health care.	81.3
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	81.3
b 5	Understanding concepts of planning for health services.	81.3
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	81.3
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	81.3
a12	Establishing program goals.	75.1
b 2	Understanding existing and proposed legislation and its impact on health.	75.0
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	68.8
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	68.8
a13	Evaluating progress toward goals.	68.8
b 8	Collecting, analyzing, interpreting and reporting health related information.	68.8

Table 91. cont. , Activities Scored High ('4 - 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
a 1	Assessing community health needs.	62. 6
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	62. 5
a21	Establishing formal and informal organizational structures to carry out functions.	56. 3
a10	Using available resources to influence legislative decisions.	50. 1
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	50. 0
a23	Developing and implementing administrative and personnel policies.	50. 0

Table 92. Job Group E. (planners for health services and health manpower) n = 16

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	75.1
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	75.1
a19	Using cost control data for the day to day management of your program.	68.8
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	56.3
a16	Identifying sources of funding; seeking funding.	56.3
a17	Preparing research or contract proposals.	56.3
a28	Conducting inservice educational and/or training programs.	65.3
a18	Using cost-benefit and cost-effectiveness analysis.	50.1
a22	Using the interdisciplinary health team approach to the solution of health problems.	50.1
b 7	Using epidemiologic methods for the study of community health problems.	50.1
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	50.1
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	50.0

Table 93. Job Group F. (practitioners of patient care without explicit community orientation) n = 16

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	66.7
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	66.6
a 5	Being aware of cultural differences in working with consumer or patient populations.	60.0
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	60.0
a22	Using the interdisciplinary health team approach to the solution of health problems.	53.3
a28	Conducting inservice educational and/or training programs.	50.0

Table 94. Job Group F. (practitioners of patient care without explicit community orientation) n = 16

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a19	Using cost control data for the day to day management of your program.	100.0
a18	Using cost-benefit and cost-effectiveness analysis.	93.3
a15	Developing budgets for your program.	86.7
a16	Identifying sources of funding; seeking funding.	86.7
a17	Preparing research or contract proposals.	86.7
a 1	Assessing community health needs.	86.6
a10	Using available resources to influence legislative decisions.	86.6
b10	Understanding the use of computers for data storage, retrieval and analysis.	86.6
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	80.0
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	80.0
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	80.0
a20	Establishing priorities for resource allocation.	73.4
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	73.3
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	73.3
a 3	Designing or planning programs to meet community health needs.	66.7
b 8	Collecting, analyzing, interpreting and reporting health related information.	66.7

Table 94.. cont., Activities Scored Low ('1 - 2')

Activity No.	Activity	% Respondents Scoring '1 - 2'
a 6	Planning and implementing community educational programs.	60.0
a25	Specifying expectations, rewards, sanctions in dealing with personnel	60.0
b 2	Understanding existing and proposed legislation and its impact on health.	60.0
b 7	Using epidemiologic methods for the study of community health problems.	60.0
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	60.0

Table 95. Job Group G. (practitioners of patient care with explicit community orientation) n = 12

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	90.9
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	75.0
a 5	Being aware of cultural differences in working with consumer or patient populations.	66.7
b 5	Understanding concepts of planning for health services.	66.7
a 3	Designing or planning programs to meet community health needs.	58.3
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	50.0
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	50.0
a22	Using the interdisciplinary health team approach to the solution of health problems.	50.0
a23	Developing and implementing administrative and personnel policies.	50.0
b 8	Collecting, analyzing, interpreting and reporting health related information.	50.0
b11	Identifying environmental hazards to human health.	50.0
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	50.0

Table 96. Job Group G. (practitioners of patient care with explicit community orientation) n = 12

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a10	Using available resources to influence legislative decisions.	83.3
a17	Preparing research or contract proposals.	75.0
a19	Using cost control data for the day to day management of your program.	75.0
a16	Identifying sources of funding; seeking funding.	65.7
a18	Using cost-benefit and cost-effectiveness analysis.	66.7
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	66.7
b10	Understanding the use of computers for data storage, retrieval and analysis.	66.7
a15	Developing budgets for your program.	66.6
b 7	Using epidemiologic methods for the study of community health problems.	58.4
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	58.3
a20	Establishing priorities for resource allocation.	58.3
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	58.3
a27	Assisting personnel with adaptation to change.	54.6
a 1	Assessing community health needs.	50.0
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	50.0
a24	Collaborating with personnel in developing policies and procedures.	50.0

Table 96. cont., Activities Scored Low ('1 - 2')

Activity No.	Activity	% Respondents Scoring '1 - 2'
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	50.0
a 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	50.0
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	50.0

Table 97. Job Group H. (environmental health administrator/
managers and consultants) n = 16

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents - Scoring '4 - 5'
b11	Identifying environmental hazards to human health.	93.8
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	75.0
a12	Establishing program goals.	68.8
a13	Evaluating progress toward goals.	68.8
a22	Using the interdisciplinary health team approach to the solution of health problems.	62.5
a28	Conducting inservice educational and/or training programs.	62.5
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	62.5
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	56.3
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	56.3
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	50.1
a15	Developing budgets for your program.	50.1
a24	Collaborating with personnel in developing policies and procedures.	50.1
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	50.1
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	50.1
a 5	Being aware of cultural differences in working with consumer or patient populations.	50.0

Table 97. cont., Listing of Activities Scored High ('4 - 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
a27	Assisting personnel with adaptation to change.	50.0
a29	Recognizing and resolving potential and real inter- personal conflict.	50.0
b 8	Collecting, analyzing, interpreting and reporting health related information.	50.0

Table 98. Job Group H. (environmental health administrator/
managers and consultants) n = 16

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a11	Introducing changes into the provision of health care.	75.1
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	75.0
a16	Identifying sources of funding; seeking funding.	75.0
b 3	Understanding how medical care is financed.	75.0
a17	Preparing research or contract proposals.	68.8
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	68.8
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	62.7
a10	Using available resources to influence legislative decisions.	62.6
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	62.6
b10	Understanding the use of computers for data storage, retrieval and analysis.	62.5
a 6	Planning and implementing community educational programs.	56.3
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	50.0

Table 99. Job Group L (environmental health practitioners) n = 13

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
b11	Identifying environmental hazards to human health.	100.0
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	75.0
a12	Establishing program goals.	61.6
a13	Evaluating progress toward goals.	61.6
a15	Developing budgets for your program.	61.5
a28	Conducting inservice educational and/or training programs.	58.4

Table 100. Job Group L (environmental health practitioners) n = 13

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	91.7
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	90.9
b 3	Understanding how medical care is financed.	83.3
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	81.8
a19	Using cost control data for the day to day management of your program.	72.7
a29	Recognizing and resolving potential and real interpersonal conflict.	66.7
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	66.7
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	66.6
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	58.4
a27	Assisting personnel with adaptation to change.	58.4
a 5	Being aware of cultural differences in working with consumer or patient populations.	58.3
a 6	Planning and implementing community educational programs.	58.3
a23	Developing and implementing administrative and personnel policies.	58.3
a16	Identifying sources of funding; seeking funding.	53.9
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	53.3

Table 100 . cont., Activities Scored Low ('1 - 2')

Activity No.	Activity	% Respondents Scoring '1 - 2'
a11	Introducing changes into the provision of health care.	51.9
a 1	Assessing community health needs.	50.0
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	50.0
a10	Using available resources to influence legislative decisions.	50.0
a17	Preparing research or contract proposals.	50.0
a18	Using cost-control benefit and cost-effectiveness analysis.	50.0

Table 101. Job Group J. (scientists and researchers) n = 18

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
b 8	Collecting, analyzing, interpreting and reporting health related information.	76.5
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	64.7
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	64.7
b 7	Using epidemiologic methods for the study of community health problems.	58.9
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	58.9
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	58.8
a13	Evaluating progress toward goals.	55.6
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	53.3
a12	Establishing program goals.	50.0

Table 102. Job Group J. (scientists and researchers) n = 18

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a16	Identifying sources of funding; seeking funding.	76.5
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	70.6
a19	Using cost control data for the day to day management of your program.	70.6
a22	Using the interdisciplinary health team approach to the solution of health problems.	64.7
b 3	Understanding how medical care is financed.	64.7
a20	Establishing priorities for resource allocation.	61.6
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	58.9
a23	Developing and implementing administrative and personnel policies.	58.9
a 1	Assessing community health needs.	58.8
a10	Using available resources to influence legislative decisions.	58.8
a11	Introducing changes into the provision of health care.	58.8
a18	Using cost-benefit and cost-effectiveness analysis.	58.8
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	58.8
a27	Assisting personnel with adaptation to change.	58.8
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	58.8
a21	Establishing formal and informal organizational structures to carry out functions.	53.0
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	53.0
a 6	Planning and implementing community educational programs.	52.9

Table 102. cont., Activities Scored Low ('1- 2')

Activity No.	Activity	% Respondents Scoring '1 - 2'
a29	Recognizing and resolving potential and real inter-personal conflict.	52.9
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	52.9
a15	Developing budgets for your program.	50.0
a17	Preparing research or contract proposals.	50.0

Table 103. Job Group K. (teachers of patient care without explicit community orientation) n = 16

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
a27	Assisting personnel with adaptation to change.	91.7
a 5	Being aware of cultural differences in working with consumer or patient populations.	85.7
a 8	Being aware of the attitudes of other Health Professionals (e. g., private sector) in the community towards community health programs.	83.4
a11	Introducing changes into the provision of health care.	77.0
a28	Conducting inservice educational and/or training programs.	77.0
b 5	Understanding concepts of planning for health services.	77.0
a13	Evaluating progress toward goals.	75.0
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	71.4
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	71.4
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	69.3
a29	Recognizing and resolving potential and real inter-personal conflict.	69.3
a12	Establishing program goals.	69.2
a24	Collaborating with personnel in developing policies and procedures.	69.2
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	69.2
a21	Establishing formal and informal organizational structures to carry out functions.	66.7

Table 103. cont., Activities Scored High ('4 -5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
b 8	Collecting, analyzing, interpreting and reporting health related information.	66.7
a 6	Planning and implementing community educational programs.	61.6
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	61.6
b12	Defining and applying various indices for measuring the level of well being and illness in the community.	61.6
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	58.3
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	53.9
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	53.9
b 7	Using epidemiologic methods for the study of community health problems.	53.9
b 2	Understanding existing and proposed legislation and its impact on health.	53.8
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	50.0
a20	Establishing priorities for resource allocation.	50.0
a22	Using the interdisciplinary health team approach to the solution of health problems.	50.0
a25	Specifying expectations, rewards, sanctions in dealing with personnel.	50.0
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	50.0

Table 104. Job Group K. (teachers of patient care without explicit community orientation) n = 16

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a18	Using cost-benefit and cost-effectiveness analysis.	70.0
a16	Identifying sources of funding; seeking funding.	58.3
b10	Using available resources to influence legislative decisions.	54.6
a15	Developing budgets for your program.	53.9
a17	Preparing research or contract proposals.	50.0
a19	Using cost control data for the day to day management of your program.	50.0

Table 105. Job Group L. (teachers of patient care and services with explicit community orientation) n = 18

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '4 - 5'
a 9	Using appropriately power, persuasion, influence and collaboration to help your program reach its goals.	88.3
b 5	Understanding concepts of planning for health services.	88.2
a 5	Being aware of cultural differences in working with consumer or patient populations.	82.4
a22	Using the interdisciplinary health team approach to the solution of health problems.	82.3
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	82.3
b 2	Understanding existing and proposed legislation and its impact on health.	82.3
a11	Introducing changes into the provision of health care.	76.5
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	76.5
a 6	Planning and implementing community educational programs.	76.4
a12	Establishing program goals.	76.4
a13	Evaluating progress toward goals.	76.4
b 6	Understanding problems related to the distribution of health manpower as they affect the solution of health problems.	70.6
a 3	Designing or planning programs to meet community health needs.	70.5
a 8	Being aware of the attitudes of other Health Professionals (e.g., private sector) in the community towards community health programs.	64.7
a28	Conducting inservice educational and/or training programs.	64.7

Table 105 . cont., Activities Scored High ('4 - 5')

Activity No.	Activity	% Respondents Scoring '4 - 5'
a26	Understanding the relationship of fulfilling basic human needs (e. g., recognition, rewards) to job productivity.	58.9
a27	Assisting personnel with adaptation to change.	58.8
b 7	Using epidemiologic methods for the study of community health problems.	58.8
b 8	Collecting, analyzing, interpreting and reporting health related information.	58.8
b11	Identifying environmental hazards to human health.	58.8
a 1	Assessing community health needs.	53.0
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	53.0
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	52.9

Table 106. Job Group L (teachers of patient care and services with explicit community orientation) n = 18

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a19	Using cost control data for the day to day management of your program.	82.3
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	64.9
a18	Using cost-benefit and cost-effectiveness analysis.	64.7
a15	Developing budgets for your program.	53.0

Table 107. Job Group M. (teachers of sciences) n = 10

Ranked Listing of Activities Scored High ('4 - 5') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
b14	Having knowledge of microbial agents causing common infectious diseases and the risk factors associated with common noninfectious diseases.	80.0
b13	Using the agent-host-environment and/or multifactorial models to understand the causation of health problems.	70.0
b11	Identifying environmental hazards to human health.	67.5
a29	Recognizing and resolving potential and real interpersonal conflict.	66.6
b15	Interpreting rates, means, medians, standard deviations and tests of statistical significance.	66.6
b 7	Using epidemiologic methods for the study of community health problems.	62.5
b 9	Using census, vital statistics, morbidity and health resources data for program planning, research or evaluation.	62.5
a17	Preparing research or contract proposals.	60.0
a14	Establishing feedback mechanisms for quality control and as indicators for needed change.	55.5
a16	Identifying sources of funding; seeking funding.	55.5
a28	Conducting inservice educational and/or training programs.	50.0
b 4	Understanding the differences and similarities of health problems in developed and developing countries.	50.0
b 8	Collecting, analyzing, interpreting and reporting health related information.	50.0

Table 108. Job Group M. (teachers of sciences) n = 10

Ranked Listing of Activities Scored Low ('1 - 2') by $\geq 50\%$ of Respondents

Activity No.	Activity	% Respondents Scoring '1 - 2'
a19	Using cost control data for the day to day management of your program.	88.9
a 4	Identifying, mobilizing and coordinating community resources in meeting community health needs.	87.5
a 6	Planning and implementing community educational programs.	87.5
a 7	Utilizing paraprofessionals and/or volunteers as part of the health team.	77.8
a10	Using available resources to influence legislative decisions.	77.8
a18	Using cost-benefit and cost-effectiveness analysis.	66.6
a20	Establishing priorities for resource allocation.	66.6
a 2	Assessing the effectiveness of existing health services in meeting community health needs.	62.5
a 3	Designing or planning programs to meet community health needs.	62.5
b10	Understanding the use of computers for data storage, retrieval and analysis.	62.5
a15	Developing budgets for your program.	55.5
a26	Understanding the relationship of fulfilling basic human needs (e.g., recognition, rewards) to job productivity.	55.5
a21	Establishing formal and informal organizational structures to carry out functions.	50.0
b 1	Understanding the difference between health care delivery systems based on crisis care as opposed to health maintenance care.	50.0
b 2	Understanding existing and proposed legislation and its impact on health.	50.0
b 3	Understanding how medical care is financed.	50.0